GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:36:45 ; Search time 12.8077 Seconds
(without alignments)
833.462 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283308 seqs, 96168682 residues

Total number of hits satisfying chosen parameters: 283308

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	551	94.5	109	2	S19663	Ig lambda chain V
2	545	93.5	108	2	S38498	Ig lambda chain -
3	545	93.5	108	2	S47184	Ig lambda chain -
4	539	92.5	127	2	S70444	Ig lambda chain pr
5	534.5	91.7	110	2	S36272	Ig lambda chain V
6	528	90.6	109	2	S38496	Ig lambda chain -
7	513	88.0	233	2	S25748	Ig lambda chain -
8	510	87.5	108	1	L3HUSH	Ig lambda chain V-
9	505.5	86.7	110	2	S19672	Ig lambda chain V
10	500.5	85.8	146	2	S02083	Ig lambda chain V-
11	497	85.2	96	2	S36060	Ig lambda chain -
12	497	85.2	115	2	S13726	Ig lambda chain V
13	489	83.9	233	2	S25741	Ig lambda chain -
14	430.5	73.8	106	2	S38495	Ig lambda chain -
15	408	70.0	105	2	S49533	anti-Sm antibody V
16	407	69.8	119	2	S30526	Ig lambda chain V
17	402	69.0	190	2	S25740	Ig lambda chain -
18	385.5	66.1	120	2	S30525	Ig lambda chain V
19	385	66.0	107	2	PC4283	anti-SS-A/Ro 60K p
20	381	65.4	226	2	S25745	Ig lambda chain -
21	376	64.5	231	2	S25738	Ig lambda chain -
22	375.5	64.4	212	2	S70431	Ig lambda chain -
23	374	64.2	120	2	S30527	Ig lambda chain V
24	372	63.8	151	2	S25739	Ig lambda chain -
25	371	63.6	231	2	S25751	Ig lambda chain -
26	367	63.0	107	1	L4HUHL	Ig lambda chain V-
27	366	62.8	231	2	S25753	Ig lambda chain -
28	364	62.4	109	2	S68171	Ig lambda chain V
29	362	62.1	111	2	S36274	Ig lambda chain V
30	362	62.1	233	2	S25747	Ig lambda chain -
31	358	61.4	108	1	L5HUDL	Ig lambda chain V-
32	357	61.2	106	1	L4HUBU	Ig lambda chain V-
33	355	60.9	132	2	S09713	Ig lambda chain V
34	351.5	60.3	112	2	S51148	antibody light cha
35	351.5	60.3	232	2	S25756	Ig lambda chain -
36	350	60.0	106	1	L4HUML	Ig lambda chain V-
37	348	59.7	106	1	L4HUX	Ig lambda chain V-
38	346.5	59.4	236	2	S25746	Ig lambda chain -
39	346	59.3	105	2	S44124	Ig lambda chain V
40	344	59.0	110	2	S57442	Ig lambda chain V-
41	344	59.0	130	1	L1HUBL	Ig lambda chain pr
42	342.5	58.7	112	2	S31515	Ig lambda chain V
43	342	58.7	95	2	S36065	Ig lambda chain -
44	342	58.7	111	1	L2HUMC	Ig lambda chain V-
45	342	58.7	114	2	S16440	Ig lambda chain -

ALIGNMENTS

RESULT 1
S19663
Ig lambda chain V region (clone alpha-BSA3) - human
C;Species: Homo sapiens (man)
C;Date: 22-Jan-1993 #sequence_revision 22-Jan-1993 #text_change 20-Jun-2000
C;Accession: S19663
R;Marks, J.D.; Hoogenboom, H.R.; Bonnert, T.P.; McCafferty, J.; Griffiths, A.D.; Winter,
J. Mol. Biol. 222, 581-597, 1991
A;Title: By-passing immunization. Human antibodies from V-gene libraries displayed on ph
A;Reference number: S19663; MUID:92085276; PMID:1748994
A;Accession: S19663
A;Molecule type: mRNA
A;Residues: 1-109 <MAR>
A;Cross-references: EMBL:X61640; NID:g29492; PIDN:CAA43821.1; PID:g1340166
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

Query Match 94.5%; Score 551; DB 2; Length 109;
Best Local Similarity 96.3%; Pred. No. 2.7e-40;
Matches 105; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||:|||||||| ||||||:|||||
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVLG 109
```

RESULT 2
S38498
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S38498
R;Marks, J.D.; Ouwehand, W.H.; Bye, J.M.; Finnern, R.; Gorick, B.D.; Voak, D.; Thorpe, S
submitted to the EMBL Data Library, June 1993
A;Description: Human antibody fragments specific for human blood group antigens from a pr
A;Reference number: S38488
A;Accession: S38498
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-108 <MAR>
A;Cross-references: EMBL:Z23035; NID:g414043; PIDN:CAA80570.1; PID:g414044
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;14-88/Domain: immunoglobulin homology <IMM>

Query Match 93.5%; Score 545; DB 2; Length 108;
Best Local Similarity 95.4%; Pred. No. 8.8e-40;

Matches 103; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||:|||| || |||||||:|||||
Db         61 SGSSSGNTASLTITGAQAEDEADYYCNSRDSIGNGWVFGGGTKLTVLG 108
```

RESULT 3
S47184
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S47184
R;McIntosh, R.S.; Tandon, N.; Metcalfe, R.A.; Weetman, A.P.
submitted to the EMBL Data Library, June 1994
A;Description: Cloning and analysis of IgM anti-thyroglobulin autoantibodies from patien
A;Reference number: S47181
A;Accession: S47184
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-108 <MCI>
A;Cross-references: EMBL:X79783; NID:g506426; PIDN:CAA56179.1; PID:g506427
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

Query Match 93.5%; Score 545; DB 2; Length 108;
Best Local Similarity 96.3%; Pred. No. 8.8e-40;
Matches 104; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||||||||||||||||||||||||:|||||||| |||||||:||||
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVL 108
```

RESULT 4
S70444
Ig lambda chain precursor V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 21-Jan-2000
C;Accession: S70444; S70426
R;Cuisinier, A.M.; Fumoux, F.; Fougereau, M.; Tonnelle, C.
Mol. Immunol. 29, 1363-1373, 1992
A;Title: IgM kappa/lambda EBV human B cell clone: an early step of differentiation of fe
A;Reference number: S70442; MUID:93024508; PMID:1383695
A;Accession: S70444
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-127 <CUI>
A;Experimental source: clone E29.1
R;Tonnelle, C.
submitted to the EMBL Data Library, May 1990
A;Reference number: S70426
A;Accession: S70426
A;Molecule type: mRNA
A;Residues: 1-90 <TON>
A;Cross-references: EMBL:X53070
A;Experimental source: cell line E29.1, clone VL 29-1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-127/Product: Ig lambda chain V region (fragment) #status predicted <MAT>
F;34-108/Domain: immunoglobulin homology <IMM>

Query Match 92.5%; Score 539; DB 2; Length 127;
Best Local Similarity 94.4%; Pred. No. 3.4e-39;
Matches 102; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db         20 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||||||||||||||||||||||||:|||||||| |||::|||
Db         80 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHYVFGTGTKVTVL 127
```

RESULT 5
S36272
Ig lambda chain V region (clone alpha-THY-29) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 21-Jan-2000
C;Accession: S36272
R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.
EMBO J. 12, 725-734, 1993
A;Title: Human anti-self antibodies with high specificity from phage display libraries.
A;Reference number: S36256; MUID:93178448; PMID:7679990
A;Accession: S36272
A;Status: preliminary; nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-110 <GRI>
A;Cross-references: EMBL:Z18833; NID:g33419; PIDN:CAA79285.1; PID:g939912
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

Query Match 91.7%; Score 534.5; DB 2; Length 110;
Best Local Similarity 94.5%; Pred. No. 7e-39;
Matches 104; Conservative 4; Mismatches 1; Indels 1; Gaps 1;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGN-HWVFGGGTELTVLG 111
              |||||||||||||||||||||||||:|||||||  : |||||||:|||||
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNLYVVFGGGTKLTVLG 110
```

RESULT 6
S38496
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S38496
R;Marks, J.D.; Ouwehand, W.H.; Bye, J.M.; Finnern, R.; Gorick, B.D.; Voak, D.; Thorpe, S
submitted to the EMBL Data Library, June 1993
A;Description: Human antibody fragments specific for human blood group antigens from a ph
A;Reference number: S38488
A;Accession: S38496
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-109 <MAR>
A;Cross-references: EMBL:Z23031; NID:g414039; PIDN:CAA80566.1; PID:g414040
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

Query Match 90.6%; Score 528; DB 2; Length 109;
Best Local Similarity 90.8%; Pred. No. 2.5e-38;
Matches 99; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:|||||||:||||||||||||||||||:||||||||||||||
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLKSYYASWYQQKPGQAPVLVMYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  |||||||||||||||||||:|||:|||| :|||||:|||||
```

```
Db         61 FSGSYPGNTASLTITGAQAEDEADYYCTSRDTSGNHVLFGGGTKLTVLG 109


RESULT 7
S25748
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25748
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25748
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-233 <COM>
A;Cross-references: EMBL:X57813; NID:g33725; PIDN:CAA40950.1; PID:g33726
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-216/Domain: immunoglobulin homology <IMM>

  Query Match             88.0%;  Score 513;  DB 2;  Length 233;
  Best Local Similarity   88.1%;  Pred. No. 1e-36;
  Matches   96;  Conservative    8;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||||:||||||||:||||||  ||||||:|||||:||||||||||
Db         20 SSELTQDPAVSVALGQTVRITCQGDSLRAYYASWYQHKPGQAPILVIYGENNRPSGIPDR 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||  |||||||||||||||:||||||:  :|||||:|||||
Db         80 FSGSSSGNTASPAITGAQAEDEADYYCNSRDSSGDQVLFGGGTKLTVLG 128


RESULT 8
L3HUSH
Ig lambda chain V-III region (Sh) - human
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 02-Sep-1997
C;Accession: A01980
R;Titani, K.; Wikler, M.; Shinoda, T.; Putnam, F.W.
J. Biol. Chem. 245, 2171-2176, 1970
A;Title: The amino acid sequence of a lambda type Bence-Jones protein. III. The complete
A;Reference number: A92057; MUID:70166723; PMID:4909564
A;Accession: A01980
A;Molecule type: protein
A;Residues: 1-108 <TIT>
A;Note: the sequence of the C region is also given
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;14-88/Domain: immunoglobulin homology <IMM>
F;21-86/Disulfide bonds: #status experimental

  Query Match             87.5%;  Score 510;  DB 1;  Length 108;
  Best Local Similarity   88.9%;  Pred. No. 8.4e-37;
  Matches   96;  Conservative    8;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||||||||||||||||:||||||| | |:||||||||||:|||||:||||||||||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRGYDAAWYQQKPGQAPLLVIYGRNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||:|||||| | :|||||:|||||
Db         61 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGKHVLFGGGTKLTVLG 108


RESULT 9
S19672
Ig lambda chain V region (clone alpha-TEL14) - human
C;Species: Homo sapiens (man)
C;Date: 22-Jan-1993 #sequence_revision 22-Jan-1993 #text_change 20-Jun-2000
C;Accession: S19672
R;Marks, J.D.; Hoogenboom, H.R.; Bonnert, T.P.; McCafferty, J.; Griffiths, A.D.; Winter,
J. Mol. Biol. 222, 581-597, 1991
A;Title: By-passing immunization. Human antibodies from V-gene libraries displayed on pha
A;Reference number: S19663; MUID:92085276; PMID:1748994
A;Accession: S19672
A;Molecule type: mRNA
A;Residues: 1-110 <MAR>
A;Cross-references: EMBL:X61644; NID:g37856; PIDN:CAA43825.1; PID:g1335384
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             86.7%;  Score 505.5;  DB 2;  Length 110;
  Best Local Similarity   89.1%;  Pred. No. 2.1e-36;
  Matches   98;  Conservative    6;  Mismatches    5;  Indels    1;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||| |||||:||||||||| ||||||||||||||:|||||:|:||||||||
Db          1 SSELTQDPAVSVAFGQTVRITCQGDSLRSSYASWYQQKPGQAPLLVIYGENSRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW-VFGGGTELTVLG 111
              |||||||||||||||||||||||||||:|||| | |  ||||||:|||||
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSRGTHLEVFGGGTKLTVLG 110


RESULT 10
S02083
Ig lambda chain V-IV region - human (tentative sequence) (fragments)
N;Alternate names: amyloid-fibril protein GIL
C;Species: Homo sapiens (man)
C;Date: 01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change 31-Mar-2000
C;Accession: S02083
R;Fykse, E.M.; Sletten, K.; Husby, G.; Cornwell III, G.G.
Biochem. J. 256, 973-980, 1988
A;Title: The primary structure of the variable region of an immunoglobulin IV light-chain
A;Reference number: S02083; MUID:89134210; PMID:3146981
A;Accession: S02083
A;Molecule type: protein
A;Residues: 1-70;71-72;73-75;76-131;132-146 <FYK>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;14-88/Domain: immunoglobulin homology <IMM>

  Query Match             85.8%;  Score 500.5;  DB 2;  Length 146;
  Best Local Similarity   88.0%;  Pred. No. 7.3e-36;
  Matches   95;  Conservative   10;  Mismatches    2;  Indels    1;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||||||||||||||||:||||||:: ||||||||||||:|||||||||||||:||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRNFVASWYQQKPGQAPLLVIYGKNNRPSGIPBRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGN-HWVFGGGTELTVL 110
              |||||||||||||||:|||||||:||:|||| | :|||||:||||
Db         61 SGSSSGNTASLTITGARAEDEADYYCNSRNSSGNYHVIFGGGTKLTVL 108


RESULT 11
S36060
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 21-Jan-2000
C;Accession: S36060
R;Williams, S.C.
submitted to the EMBL Data Library, April 1993
A;Reference number: S36046
A;Accession: S36060
A;Status: preliminary
```

```
A;Molecule type: DNA
A;Residues: 1-96 <WIL>
A;Cross-references: EMBL:Z22202; NID:g312325; PIDN:CAA80211.1; PID:g312326
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             85.2%;  Score 497;  DB 2;  Length 96;
  Best Local Similarity   97.9%;  Pred. No. 9.6e-36;
  Matches   94;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH 98
              |||||||||||||||||||||||||:||||||||
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNH 96


RESULT 12
S13726
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 25-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 21-Jan-2000
C;Accession: S13726
R;Frippiat, J.P.; Chuchana, P.; Bernard, F.; Buluwela, L.; Lefranc, G.; Lefranc, M.P.
Nucleic Acids Res. 18, 7134, 1990
A;Title: First genomic sequence of a human Ig variable lambda gene belonging to subgroup
A;Reference number: S13726; MUID:91088295; PMID:2124677
A;Accession: S13726
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-115 <FRI>
A;Cross-references: EMBL:X56178; NID:g33404; PIDN:CAA39639.1; PID:g33405
C;Genetics:
A;Introns: 16/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-108/Domain: immunoglobulin homology <IMM>

  Query Match             85.2%;  Score 497;  DB 2;  Length 115;
  Best Local Similarity   97.9%;  Pred. No. 1.1e-35;
  Matches   94;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db         20 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH 98
              |||||||||||||||||||||||||:||||||||
Db         80 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNH 115


RESULT 13
S25741
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25741
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25741
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-233 <COM>
A;Cross-references: EMBL:X57805; NID:g33707; PIDN:CAA40943.1; PID:g33708
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;148-216/Domain: immunoglobulin homology <IMM>

  Query Match             83.9%;  Score 489;  DB 2;  Length 233;
  Best Local Similarity   84.3%;  Pred. No. 1.1e-34;
  Matches   91;  Conservative   10;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||| ||||||||:|: ||||::|||||||||||||||| |:| ||:|||||||||
Db         20 SSELTQDPTVSVALGQTLRIKCQGDTIRSYYASWYQQKPGQAPTLLINGKDNRPSGIPDR 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||:|||||||||| ||||||||||:||||| :| ||||||:||||
Db         80 FSGSTSGNTASLTITGTQAEDEADYYCNSRDSSAHHLVFGGGTKLTVL 127


RESULT 14
S38495
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S38495
R;Marks, J.D.; Ouwehand, W.H.; Bye, J.M.; Finnern, R.; Gorick, B.D.; Voak, D.; Thorpe, S
submitted to the EMBL Data Library, June 1993
A;Description: Human antibody fragments specific for human blood group antigens from a pl
A;Reference number: S38488
A;Accession: S38495
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-106 <MAR>
A;Cross-references: EMBL:Z23029; NID:g414037; PIDN:CAA80564.1; PID:g414038
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             73.8%;  Score 430.5;  DB 2;  Length 106;
  Best Local Similarity   76.1%;  Pred. No. 4.9e-30;
  Matches   83;  Conservative   13;  Mismatches   10;  Indels    3;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||:|||||||||||||||||||||:||||::  | ||||||:|
Db          1 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQSPVLVMFLDNKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|||||:|||:  || |||||:| : |   |  :|||||::||||
Db         61 FSGSNSGNTATLTISETQAMDEADYFCQAWD---NGVIFGGGTKVTVLG 106


RESULT 15
S49533
anti-Sm antibody VL chain (V lambda 3b/J lambda 2/3) - human
C;Species: Homo sapiens (man)
C;Date: 01-Feb-1995 #sequence_revision 12-May-1995 #text_change 21-Jan-2000
C;Accession: S49533
R;Mahmoudi, M.; Edwards, J.; Cairns, E.; Bell, D.
submitted to the EMBL Data Library, October 1994
A;Description: Molecular characterization of natural human anti-Sm autoantibodies.
A;Reference number: S48797
A;Accession: S49533
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-105 <MAH>
A;Cross-references: EMBL:Z46346; NID:g560845; PIDN:CAA86465.1; PID:g1340169
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;11-85/Domain: immunoglobulin homology <IMM>

  Query Match             70.0%;  Score 408;  DB 2;  Length 105;
  Best Local Similarity   73.3%;  Pred. No. 4e-28;
  Matches   77;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          7 TQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGS 66
              || |:|||: ||| |:|| ||:|   || |||||||||||||  : ||||||:|||||
Db          1 TQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFSGS 60

Qy         67 SGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||| | :|||:| |||||||||| | |||| : ||||||:|||||
```

```
Db         61 SSGTTVTLTISGVQAEDEADYYCQSADSSGTYVVFGGGTKLTVLG 105


RESULT 16
S30526
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S30526
R;Mariette, X.
submitted to the EMBL Data Library, October 1992
A;Reference number: S30520
A;Accession: S30526
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-119 <MAR>
A;Cross-references: EMBL:Z18332
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;[redacted]-89/Domain: immunoglobulin homology <IMM>

  Query Match             69.8%;  Score 407;  DB 2;  Length 119;
  Best Local Similarity   73.4%;  Pred. No. 5.5e-28;
  Matches   80;  Conservative    9;  Mismatches   18;  Indels    2;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  : ||||||:|
Db          1 SYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||| | :|||:| |||||||||| | ||||   ||||||:|||||
Db         61 FSGSSSGTTVTLTISGVQAEDEADYYCQSADSSGP--VFGGGTKLTVLG 107


RESULT 17
S25740
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25740
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25740
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-190 <COM>
[redacted]ss-references: EMBL:X57804; NID:g33705; PIDN:CAA40942.1; PID:g33706
C;[redacted]perfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;105-173/Domain: immunoglobulin homology <IMM>

  Query Match             69.0%;  Score 402;  DB 2;  Length 190;
  Best Local Similarity   87.1%;  Pred. No. 2.3e-27;
  Matches   74;  Conservative    8;  Mismatches    3;  Indels    0;  Gaps    0;

Qy         27 DSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGNTASLTITGAQAEDEAD 86
              |||| |:|:|::|||||||:|||||:|||||||| ||||||||||||||||||||||||
Db          1 DSLRRYFANWHRQKPGQAPILVIYGQNNRPSGIPGRFSGSSSGNTASLTITGAQAEDEAD 60

Qy         87 YYCSSRDSSGNHWVFGGGTELTVLG 111
              |||:|||||||| ||||||:|||||
Db         61 YYCNSRDSSGNHLVFGGGTKLTVLG 85


RESULT 18
S30525
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S30525
R;Mariette, X.
submitted to the EMBL Data Library, October 1992
A;Reference number: S30520
A;Accession: S30525
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-120 <MAR>
A;Cross-references: EMBL:Z18331
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             66.1%;  Score 385.5;  DB 2;  Length 120;
  Best Local Similarity   68.8%;  Pred. No. 3.8e-26;
  Matches   75;  Conservative   14;  Mismatches   19;  Indels    1;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| :|| || | : || |||||||||:||:|||  : ||||||:|
Db          1 SYELTQPPSVSVSPGQTASITCSGDKLGNKYACWYQQKPGQSPVVVIYQDSKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|||||:|||:| || ||||||| : |||  : ||||||:|||||
Db         61 FSGSNSGNTATLTISGTQAMDEADYYCQAWDSS-TYVVFGGGTKLTVLG 108


RESULT 19
PC4283
anti-SS-A/Ro 60K peptide light chain E-60 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 07-Jul-1997 #sequence_revision 29-Aug-1997 #text_change 16-Jul-1999
C;Accession: PC4283
R;Suzuki, H.; Takemura, H.; Suzuki, M.; Sekine, Y.; Kashiwagi, H.
Biochem. Biophys. Res. Commun. 232, 101-106, 1997
A;Title: Molecular cloning of anti-ss-A/Ro 60-kDa peptide fab fragments from infiltratin
A;Reference number: PC4279; MUID:97236289; PMID:9125110
A;Accession: PC4283
A;Molecule type: protein
A;Residues: 1-107 <SUZ>
C;Comment: This antibody is commonly found in systemic autoimmune diseases such as Sjoeg
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;13-87/Domain: immunoglobulin homology <IMM>

  Query Match             66.0%;  Score 385;  DB 2;  Length 107;
  Best Local Similarity   69.2%;  Pred. No. 3.7e-26;
  Matches   74;  Conservative   10;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              || | |:|||: |||  :|| || |    |  ||||||||:||||||  | |||||| |||
Db          1 ELLQPPSVSVSPGQTASITCSGDKLGDKYTCWYQQKPGQSPVLVIYQDNKRPSGIPGRFS 60

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||:|||||:|||:| || ||||||| : ||: |  |||||||:|||||
Db         61 GSNSGNTATLTISGTQAMDEADYYCQAWDSNRNTVVFGGGTKLTVLG 107


RESULT 20
S25745
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25745
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25745
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-226 <COM>
A;Cross-references: EMBL:X57810; NID:g33717; PIDN:CAA40947.1; PID:g33718
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;141-209/Domain: immunoglobulin homology <IMM>
```

```
  Query Match             65.4%;  Score 381;  DB 2;  Length 226;
  Best Local Similarity   67.9%;  Pred. No. 1.7e-25;
  Matches   74;  Conservative   11;  Mismatches   24;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |: ||: |:| |:|| ||:|   || ||||| ||:|||||    |||||:|
Db         13 SYELTQPPSGSVSPGKTARITCSGDALPKKYAYWYQQKSGQSPVLVIYEDTKRPSGIPER 72

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || ||||  ::|||:||| |||||||| | |  ||| ||||||:|||||
Db         73 FSFSSSGTMSTLTISGAQVEDEADYYCYSTDRRGNHRVFGGGTKLTVLG 121


RESULT 21
S25738
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25738
R;[illegible]mbriato, G.; Klobeck, H.G.
[illegible] J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25738
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-231 <COM>
A;Cross-references: EMBL:X57802; NID:g33701; PIDN:CAA40940.1; PID:g33702
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;146-214/Domain: immunoglobulin homology <IMM>

  Query Match             64.5%;  Score 376;  DB 2;  Length 231;
  Best Local Similarity   67.9%;  Pred. No. 4.6e-25;
  Matches   74;  Conservative   13;  Mismatches   20;  Indels    2;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: |||  :|| ||:|   || ||||||| :|||||:  : ||||||:|
Db         20 SYELTQPPSVSVSPGQTASITCSGDTLGDKYACWYQQKPGHSPVLVIFQDSKRPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|||||:|||:| || ||||||| : |||    ||||||:|||||
Db         80 FSGSNSGNTATLTISGTQAMDEADYYCQAWDSSTA--VFGGGTKLTVLG 126


RESULT 22
S70431
[illegible]lambda chain - American mink (fragment)
[illegible]ecies: Mustela vison (American mink)
C[illegible]ate: 28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change 21-Jan-2000
C;Accession: S70431
R;Chlebodarova, T.M.; Karasik, G.I.; Matveeva, N.M.; Lapteva, S.E.; Serov, O.L.; Nayaksh
Dokl. Akad. Nauk SSSR 311, 487-491, 1990
A;Title: cDNA sequence and chromosomal localization of the lambda-light immunoglobulin c
A;Reference number: S70431; MUID:90305767; PMID:2114275
A;Accession: S70431
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-212 <CHL>
A;Cross-references: EMBL:X56270; NID:g1175; PIDN:CAA39711.1; PID:g833789
A;Note: this paper is in Russian
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;127-195/Domain: immunoglobulin homology <IMM>

  Query Match             64.4%;  Score 375.5;  DB 2;  Length 212;
  Best Local Similarity   67.0%;  Pred. No. 4.7e-25;
  Matches   71;  Conservative   17;  Mismatches   17;  Indels    1;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| | |||||||| |||| |::: :    |||||||||:|:||  :|||||||:||||
Db          3 LTQPPFVSVALGQTARVTCGGNNIGNKNVHWYQQKPGQAPILIIYESSNRPSGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ::||| :|||:||:|||||||||   |:| : :||||||:|||||
Db         63 TNSGNMVTLTISGARAEDEADYYCQVWDTSSD-YVFGGGTQLTVLG 107


RESULT 23
S30527
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
C;Accession: S30527
R;Mariette, X.
submitted to the EMBL Data Library, October 1992
A;Reference number: S30520
A;Accession: S30527
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-120 <MAR>
A;Cross-references: EMBL:Z18333
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             64.2%;  Score 374;  DB 2;  Length 120;
  Best Local Similarity   66.0%;  Pred. No. 3.6e-25;
  Matches   70;  Conservative   17;  Mismatches   19;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||| ||| |:|| |::: |    |||||||||||||:|  ::||||||:||||
Db          4 LTQPPSVSVAPGQTARITCGGNNIGSKSVHWYQQKPGQAPVLVVYDDSDRPSGIPERFSG 63

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|||||:|||:  :| |||||||    ||| :|:||| ||::||||
Db         64 SNSGNTATLTISRVEAGDEADYYCQVWDSSSDHYVFGTGTKVTVLG 109


RESULT 24
S25739
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25739
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25739
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-151 <COM>
A;Cross-references: EMBL:X57803; NID:g33703; PIDN:CAA40941.1; PID:g33704
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-108/Domain: immunoglobulin homology <IMM>

  Query Match             63.8%;  Score 372;  DB 2;  Length 151;
  Best Local Similarity   66.1%;  Pred. No. 6.7e-25;
  Matches   72;  Conservative   13;  Mismatches   22;  Indels    2;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: |||  :|| ||:|   || ||||||| :|||||:  : ||||||:|
Db         20 SYELTQPPSVSVSPGQTASITCSGDTLGDKYACWYQQKPGHSPVLVIFQDSKRPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|||||:|||:| || ||||||| :      | ||||||:|||||
Db         80 FSGSNSGNTATLTISGTQAMDEADYYCQALGQ--QHCVFGGGTKLTVLG 126


RESULT 25
S25751
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25751
```

R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25751
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-231 <COM>
A;Cross-references: EMBL:X57816; NID:g33731; PIDN:CAA40953.1; PID:g33732
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;146-214/Domain: immunoglobulin homology <IMM>

Query Match 63.6%; Score 371; DB 2; Length 231;
Best Local Similarity 67.9%; Pred. No. 1.2e-24;
Matches 74; Conservative 12; Mismatches 21; Indels 2; Gaps 1;

Qy 3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
Db 20 SYELTQPPSVSVSPGKTASITCSGDKLGDKYASWYQQKAGQSPVLVIYRHSKRPSGIPER 79

Qy 63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 111
Db 80 FSGSNSGNTATLTISGTQVMDEADYYCQAWDSS--IVVFGGGTKLTVLG 126

RESULT 26
L4HUHL
Ig lambda chain V-IV region (Hil) - human
C;Species: Homo sapiens (man)
C;Date: 31-May-1979 #sequence_revision 31-May-1979 #text_change 02-Sep-1997
C;Accession: A01983
R;Lopez de Castro, J.A.; Chiu, Y.Y.H.; Poljak, R.J.
Biochemistry 17, 1718-1723, 1978
A;Title: Amino acid sequence of the variable region of the light (lambda) chain from hum
A;Reference number: A01983; MUID:78187276; PMID:418804
A;Accession: A01983
A;Molecule type: protein
A;Residues: 1-107 <LOP>
A;Note: the sequence of the C region is apparently identical with that of human Sh lambd
C;Comment: This chain was isolated from a myeloma protein.
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer
F;15-89/Domain: immunoglobulin homology <IMM>
F;22-87/Disulfide bonds: #status predicted

Query Match 63.0%; Score 367; DB 1; Length 107;
Best Local Similarity 64.2%; Pred. No. 1.3e-24;
Matches 70; Conservative 16; Mismatches 21; Indels 2; Gaps 1;

Qy 3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
Db 1 SYELTQPPSVSVSPGQTARITCSANALPNQYAYWYQQKPGRAPVMVIYKDTQRPSGIPQR 60

Qy 63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 61 FSSSTSGTTVTLTISGVQAEDEADYYCQAWDNSAS--IFGGGTKLTVLG 107

RESULT 27
S25753
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25753
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lamb
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25753
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-231 <COM>
A;Cross-references: EMBL:X57818; NID:g33735; PIDN:CAA40955.1; PID:g33736
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;146-214/Domain: immunoglobulin homology <IMM>

Query Match 62.8%; Score 366; DB 2; Length 231;
Best Local Similarity 66.7%; Pred. No. 3.3e-24;
Matches 72; Conservative 13; Mismatches 21; Indels 2; Gaps 1;

Qy 3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
Db 20 SYELTQPPSVSVSPGQTASITCFGDKLGDKYSSWYQQKPGQSPLLVLYQDTNRPSGIPER 79

Qy 63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
Db 80 FSGSNSGNTATLTISETQAMDEGDYYCQAWDS--NTVVFGGGTKLTVL 125

RESULT 28
S68171
Ig lambda chain V region - human (fragment)
N;Alternate names: anti-cytomegalovirus glycoprotein B antibody
C;Species: Homo sapiens (man)
C;Date: 29-Jul-1997 #sequence_revision 29-Aug-1997 #text_change 21-Jan-2000
C;Accession: S68171
R;Boeldicke, T.; Haase, B.; Boecher, M.; Lindenmaier, W.
Eur. J. Biochem. 234, 397-405, 1995
A;Title: Human monoclonal antibodies to cytomegalovirus. Characterization and recombinant
A;Reference number: S68170; MUID:96128166; PMID:8536681
A;Accession: S68171
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-109 <BOE>
A;Cross-references: GB:S80751; NID:g1246063; PIDN:AAB35862.1; PID:g1246064
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

Query Match 62.4%; Score 364; DB 2; Length 109;
Best Local Similarity 63.6%; Pred. No. 2.3e-24;
Matches 68; Conservative 15; Mismatches 24; Indels 0; Gaps 0;

Qy 5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
Db 3 ELTQPPSVSVAPGQTARITCQGNNIGSKSVHWYQQMAGQAPVLVVYNDRDRPSGIPERFS 62

Qy 65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 63 GSNFGKTATLTISRVEAGDEADYYCQVWDSYSDHWVFGGGTKVTVLG 109

RESULT 29
S36274
Ig lambda chain V region (clone alpha-THY-32) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 21-Jan-2000
C;Accession: S36274
R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.
EMBO J. 12, 725-734, 1993
A;Title: Human anti-self antibodies with high specificity from phage display libraries.
A;Reference number: S36256; MUID:93178448; PMID:7679990
A;Accession: S36274
A;Status: preliminary; nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-111 <GRI>
A;Cross-references: EMBL:Z18835; NID:g33420; PIDN:CAA79287.1; PID:g939913
C;Superfamily: immunoglobulin V region; immunoglobulin homology

```
C;Keywords: heterotetramer; immunoglobulin
F;15-91/Domain: immunoglobulin homology <IMM>

  Query Match           62.1%;  Score 362;  DB 2;  Length 111;
  Best Local Similarity   65.5%;  Pred. No. 3.5e-24;
  Matches   72;  Conservative   10;  Mismatches   26;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSL--RSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |:|| | || | ::| | |     |   |||| || || |:||| :|||||:||
Db          2 SVLTQPPSVSGAPGQRVTISCTGSSNIGAGYDVHWYQQLPGAAPKLLIYGNSNRPSGVPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :||| ||| ||||||||||| | ||| : |||||||::||||
Db         62 RFSGSKSGTSASLAITGLQAEDEADYYCQSYDSSLSGWVFGGGTKVTVLG 111


RESULT 30
S25747
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25747
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25747
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-233 <COM>
A;Cross-references: EMBL:X57812; NID:g33723; PIDN:CAA40949.1; PID:g33724
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;148-216/Domain: immunoglobulin homology <IMM>

  Query Match           62.1%;  Score 362;  DB 2;  Length 233;
  Best Local Similarity   65.1%;  Pred. No. 7.3e-24;
  Matches   69;  Conservative   15;  Mismatches   22;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||| |:  |:|| | :: |    |||||||||||||:|| ::||||||:||||
Db         23 LTQPPSVSVAPGKAARITCGGINIASKSVHWYQQKPGQAPVLVVYGDSDRPSGIPERFSG 82

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|||||:| |:  :| ||| |||   ||| :| ||||||:|||||
Db         83 SNSGNTATLNISRVEAGDEAAYYCQVWDSSSDHVVFGGGTKLTVLG 128


RESULT 31
DEL
Ig lambda chain V-V region (Del) - human (tentative sequence)
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 31-Mar-2000
C;Accession: A01985
R;Eulitz, M.
Eur. J. Biochem. 50, 49-69, 1974
A;Title: A new subgroup of human L-chains of the lambda-type. Primary structure of Bence
A;Reference number: A01985; MUID:75112179; PMID:4452363
A;Accession: A01985
A;Molecule type: protein
A;Residues: 1-108 <EUL>
A;Note: this is the first sequenced V region of lambda chain subgroup V
C;Comment: This is a Bence Jones protein.
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer
F;14-88/Domain: immunoglobulin homology <IMM>
F;21-86/Disulfide bonds: #status predicted

  Query Match           61.4%;  Score 358;  DB 1;  Length 108;
  Best Local Similarity   64.2%;  Pred. No. 7.5e-24;
  Matches   68;  Conservative   14;  Mismatches   24;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              |:| |:|||| ||| |:|| || :      |||||||||||||::  |:||:|||:||||
Db          3 LSQPPSVSVAPGQTARITCGGDGIGGKSVHWYQQKPGQAPVLVVHEDNDRPAGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|||||:|||:  :| |||||||   |    | ||||||:|||||
Db         63 SNSGNTAALTISRVEAGDEADYYCEVWDDRTAHVVFGGGTKLTVLG 108


RESULT 32
L4HUBU
Ig lambda chain V-IV region (Bau) - human
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 02-Sep-1997
C;Accession: A01981
R;Baczko, K.; Braun, D.; Hilschmann, N.
Hoppe-Seyler's Z. Physiol. Chem. 355, 131-154, 1974
A;Title: Pattern of antibody structure. The primary structure of a monoclonal immunoglob
A;Reference number: A01981; MUID:75059189; PMID:4435717
A;Accession: A01981
A;Molecule type: protein
A;Residues: 1-106 <BAC>
C;Comment: This is a Bence Jones protein.
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer
F;14-88/Domain: immunoglobulin homology <IMM>
F;21-86/Disulfide bonds: #status predicted

  Query Match           61.2%;  Score 357;  DB 1;  Length 106;
  Best Local Similarity   65.1%;  Pred. No. 8.9e-24;
  Matches   69;  Conservative   13;  Mismatches   22;  Indels    2;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |::||: |||  :|| || |   |  |||||||:|||||  : ||||||:||||
Db          3 LTQPPSLSVSPGQTASITCSGDKLGEQYVCWYQQKPGQSPVLVIYHDSKRPSGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|| ||:|||:| || ||||||| : ||  :|||||:|||||
Db         63 SNSGTTATLTISGTQAMDEADYYCQAWDS--YTVIFGGGTKLTVLG 106


RESULT 33
S09713
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 21-Jan-2000
C;Accession: S09713
R;Hughes-Jones, N.C.; Bye, J.M.; Beale, D.; Coadwell, J.
Biochem. J. 268, 135-140, 1990
A;Title: Nucleotide sequences and three-dimensional modelling of the VH and VL domains o
A;Reference number: S09710; MUID:90262535; PMID:2111699
A;Accession: S09713
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-132 <HUG>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-110/Domain: immunoglobulin homology <IMM>

  Query Match           60.9%;  Score 355;  DB 2;  Length 132;
  Best Local Similarity   66.4%;  Pred. No. 1.6e-23;
  Matches   73;  Conservative   11;  Mismatches   22;  Indels    4;  Gaps    2;
```

```
Qy          6 LTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||| |:|||| ||| |:|| | |  :    ' ||||||||||||||:|| ::||||||:||
Db         23 LTQPPSVSVAPGQTARITCGGTSNNIGRKSVHWYQQKPGQAPVLVVYGASDRPSGIPERF 82

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH--WVFGGGTELTVLG 111
              |||:|||||:|||:   | |||||||   |||  |   ||||||:|||||
Db         83 SGSNSGNTATLTISRVAAGDEADYYCQVWDSSSAHPGVVFGGGTKLTVLG 132


RESULT 34
S51148
antibody light chain V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 07-May-1995 #sequence_revision 01-Sep-1995 #text_change 21-Jan-2000
C;Accession: S51148
R;de Kruif, J.; Boel, E.; Logtenberg, T.
submitted to the EMBL Data Library, January 1995
A;Description: Selection and application of human SCFV antibody fragments from a semi-sy
A;Reference number: S51147
A;Accession: S51148
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-112 <DEK>
A;Cross-references: EMBL:X83713
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;13-90/Domain: immunoglobulin homology <IMM>

  Query Match             60.3%;  Score 351.5;  DB 2;  Length 112;
  Best Local Similarity   64.5%;  Pred. No. 2.8e-23;
  Matches   71;  Conservative    9;  Mismatches   27;  Indels    3;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              |||| |:|| | || | ::| | |       |   |||| || || |:||| :|||||:||
Db          1 ELTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPGTAPKLLIYGNSNRPSGVPD 60

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :||| ||| |||||||||| | ||| :   |||||:|||||
Db         61 RFSGSKSGTSASLAITGLQAEDEADYYCQSYDSSLSGSAFGGGTKLTVLG 110


RESULT 35
S25756
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25756
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25756
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-232 <COM>
A;Cross-references: EMBL:X57821; NID:g33741; PIDN:CAA40958.1; PID:g33742
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;147-215/Domain: immunoglobulin homology <IMM>

  Query Match             60.3%;  Score 351.5;  DB 2;  Length 232;
  Best Local Similarity   65.1%;  Pred. No. 5.7e-23;
  Matches   69;  Conservative   16;  Mismatches   20;  Indels    1;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||| |:|  :|| |::: |    |||||||||||||:|  ::||||||:||||
Db         23 LTQPPSVSVAPGKTASITCGGNNIGSKSVHWYQQKPGQAPVLVVYDDSDRPSGIPERFSG 82

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|||||:|||:  :| |||||||   ||| :  ||||||:|||||
Db         83 SNSGNTATLTISRVEAGDEADYYCQVWDSSSD-VVFGGGTKLTVLG 127


RESULT 36
L4HUML
Ig lambda chain V-IV region (Mol) - human
C;Species: Homo sapiens (man)
C;Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 02-Sep-1997
C;Accession: A26019
R;Holm, E.; Sletten, K.; Husby, G.
Biochem. J. 239, 545-551, 1986
A;Title: Structural studies of a carbohydrate-containing immunoglobulin-lambda-light-chai
A;Reference number: A26019; MUID:87156515; PMID:3103603
A;Accession: A26019
A;Molecule type: protein
A;Residues: 1-106 <HOL>
A;Note: residues 29-30 and 56-58 were positioned by homology
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kapp
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: amyloid; glycoprotein; heterotetramer; immunoglobulin
F;14-88/Domain: immunoglobulin homology <IMM>
F;21-86/Disulfide bonds: #status predicted
F;90/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             60.0%;  Score 350;  DB 1;  Length 106;
  Best Local Similarity   62.6%;  Pred. No. 3.5e-23;
  Matches   67;  Conservative   17;  Mismatches   21;  Indels    2;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: |||  ::| || |    |  |||| |||:|:|||  : ||||||:|||
Db          2 ELTQPPSVSVSPGQTATISCSGDKLGESYYDWYQQSPGQSPLLVIYEGDKRPSGIPZRFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||:|||||:|||:| :: ||||||| : :||    :|||||:|||||
Db         62 GSNSGNTATLTISGTESMDEADYYCQAWNSSS--VLFGGGTKLTVLG 106


RESULT 37
L4HUX
Ig lambda chain V-IV region (X) - human
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 02-Sep-1997
C;Accession: A01982
R;Milstein, C.; Clegg, J.B.; Jarvis, J.M.
Biochem. J. 110, 631-652, 1968
A;Title: Immunoglobulin lambda-chains. The complete amino acid sequence of a Bence-Jones
A;Reference number: A90243; MUID:69088380; PMID:4883841
A;Accession: A01982
A;Molecule type: protein
A;Residues: 1-106 <MIL>
C;Comment: This is a Bence Jones protein.
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kapp
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer
F;14-88/Domain: immunoglobulin homology <IMM>
F;21-86/Disulfide bonds: #status predicted

  Query Match             59.7%;  Score 348;  DB 1;  Length 106;
  Best Local Similarity   65.1%;  Pred. No. 5.2e-23;
  Matches   69;  Conservative   11;  Mismatches   24;  Indels    2;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :||| |:|||: |||  :|| || |       ||||:|||:||||||  | | ||||:|||
Db          2 DLTQPPSVSVSPGQTASITCSGDKLGDKDVCWYQQRPGQSPVLVIYQDNQRSSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
```

```
              ||:|||||:|||:| || ||||||| : ||     |||||| ||||
Db         62 GSNSGNTATLTISGTQAMDEADYYCQAWDSMS--VVFGGGTRLTVL 105
```

RESULT 38
S25746
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 21-Jan-2000
C;Accession: S25746
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S25746
A;Status: preliminary; translation not shown
A;Molecule type: mRNA
A;Residues: 1-236 <COM>
A;Cross-references: EMBL:X57811; NID:g33721; PIDN:CAA40948.1; PID:g33722
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;151-219/Domain: immunoglobulin homology <IMM>

  Query Match 59.4%; Score 346.5; DB 2; Length 236;
  Best Local Similarity 61.3%; Pred. No. 1.5e-22;
  Matches 68; Conservative 12; Mismatches 28; Indels 3; Gaps 1;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |:|| | || : ::| | |       ::  |||| || || |:||  ||||||:|
Db         21 SVLTQPPSVSGAPGQKITISCSGTSSNIGAGHHVHWYQQVPGTAPKLLIYADNNRPSGVP 80

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || ||| || :||| ||| :||||||||| | ||| : ||||| |:|||||
Db         81 DRISGSKSGTSASLAITGLRAEDEADYYCQSFDSSLSGWVFGGATKLTVLG 131
```

RESULT 39
S44124
Ig lambda chain V region - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 24-May-2001
C;Accession: S44124; S44109
R;Hawkins, R.E.; Zhu, D.; Ovecka, M.; Winter, G.; Hamblin, T.J.; Stevenson, F.K.
submitted to the EMBL Data Library, March 1994
A;Description: Idiotypic vaccination against human B-cell lymphoma: rescue of variable r
A;Reference number: S44105
A;Accession: S44124
A;Molecule type: DNA
A;Residues: 1-105 <HAW>
A;Cross-references: EMBL:Z31380
A;Accession: S44109
A;Molecule type: DNA
A;Residues: 1-105 <HA2>
A;Cross-references: EMBL:Z31381; NID:g472963; PIDN:CAA83256.1; PID:g940521
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match 59.3%; Score 346; DB 2; Length 105;
  Best Local Similarity 64.2%; Pred. No. 7.6e-23;
  Matches 70; Conservative 12; Mismatches 23; Indels 4; Gaps 2;

```
Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| :|| || |      ||||:|||:||||||    ||||||:|
Db          1 SYELTQPPSVSVSPGQTASITCSGDKLGDKDVCWYQQRPGQSPVLVIYQDTKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|||||:|||:| || ||||||| : ||:    ||||||:  |||
Db         61 FSGSNSGNTATLTISGTQAMDEADYYCQAWDST---TVFGGGTQ-AVLG 105
```

RESULT 40
S57442

Ig lambda chain V-J region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 10-Oct-1995 #sequence_revision 17-Nov-1995 #text_change 21-Jan-2000
C;Accession: S57442
R;Paterson, G.; Wilson, G.; Kennedy, P.G.E.; Willison, H.J.
submitted to the EMBL Data Library, June 1995
A;Description: Analysis of anti-GM1 ganglioside IgM antibodies cloned from motor neuropa
A;Reference number: S57408
A;Accession: S57442
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-110 <PAT>
A;Cross-references: EMBL:X87892; NID:g871287; PIDN:CAA61143.1; PID:g871288
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;15-92/Domain: immunoglobulin homology <IMM>

  Query Match 59.0%; Score 344; DB 2; Length 110;
  Best Local Similarity 62.7%; Pred. No. 1.2e-22;
  Matches 69; Conservative 17; Mismatches 20; Indels 4; Gaps 3;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:: ::| | |  : :| | ||||| ||:|| |:||| ||||||:
Db          2 SALTQPASVSGSPGQSITISCTGTSTDIGAYNYVSWYQQHPGKAPKLIIYGVNNRPSGVS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||| |||||||||:| ||:|||||:|:|  |: | |||||||:||||
Db         62 TRFSGSKSGNTASLTISGLQAQDEADYFCTSYRST-NAWVFGGGTKLTVL 110
```

RESULT 41
L1HUBL
Ig lambda chain precursor V-I region (BL2) - human
C;Species: Homo sapiens (man)
C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 22-Jun-1999
C;Accession: A01966
R;Tsujimoto, Y.; Croce, C.M.
Nucleic Acids Res. 12, 8407-8414, 1984
A;Title: Molecular cloning of a human immunoglobulin lambda chain variable sequence.
A;Reference number: A01966; MUID:85062823; PMID:6095199
A;Accession: A01966
A;Molecule type: mRNA
A;Residues: 1-130 <TSU>
A;Cross-references: GB:X01147; NID:g33335; PIDN:CAA25598.1; PID:g758087
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kapp
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-130/Product: Ig lambda chain V-I region (BL2) #status predicted <MAT>
F;20-115/Region: V segment
F;34-110/Domain: immunoglobulin homology <IMM>
F;116-130/Region: J segment
F;41-108/Disulfide bonds: #status predicted

  Query Match 59.0%; Score 344; DB 1; Length 130;
  Best Local Similarity 61.8%; Pred. No. 1.4e-22;
  Matches 68; Conservative 13; Mismatches 27; Indels 2; Gaps 1;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |:|| | || | ::| | |  : : | ||||| || || |:||  | |||||||
Db         21 SVLTQPPSVSAAPGQKVTISCSGSSSNIGNDYVSWYQQVPGTAPKLLIYDNNKRPSGIPD 80

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :|:| ||| |  |||||||  : ::| : |||||||:|||||
Db         81 RFSGSKSGTSATLGITGLQTGDEADYYCGTWNNSLSGWVFGGGTKLTVLG 130
```

RESULT 42
S31515

```
Ig lambda chain V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 21-Jan-2000
C;Accession: S31515
R;van der Heijden, R.W.J.; Uytdehaag, F.G.C.M.; Osterhaus, A.D.M.E.
submitted to the EMBL Data Library, January 1993
A;Description: V-lambda-2 gene sequence of a high affinity anti-idiotypic IgM antibody f
A;Reference number: S31515
A;Accession: S31515
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-112 <VAN>
A;Cross-references: EMBL:Z19546; NID:g33754; PIDN:CAA79606.1; PID:g33755
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-92/Domain: immunoglobulin homology <IMM>

  Query Match             58.7%;  Score 342.5;  DB 2;  Length 112;
  Best Local Similarity   61.8%;  Pred. No. 1.6e-22;
  Matches   68;  Conservative   16;  Mismatches   23;  Indels    3;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:: ::| | |  :  | | ||||| ||:|| |:||  :||||||:
Db          2 SALTQPASVSGSPGQSITISCTGTSSDIGDYDYVSWYQQHPGKAPKLMIYDVSNRPSGVS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              :||||| |||||||||:| ||||||||||||  |:   |||||||::|||
Db         62 NRFSGSKSGNTASLTISGLQAEDEADYYCSSYTSTNTLWVFGGGTKVTVL 111


RESULT 43
S36065
Ig lambda chain - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 21-Jan-2000
C;Accession: S36065
R;Williams, S.C.
submitted to the EMBL Data Library, April 1993
A;Reference number: S36046
A;Accession: S36065
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-95 <WIL>
A;Cross-references: EMBL:Z22208; NID:g312871; PIDN:CAA80216.1; PID:g312872
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-89/Domain: immunoglobulin homology <IMM>

  Query Match             58.7%;  Score 342;  DB 2;  Length 95;
  Best Local Similarity   69.9%;  Pred. No. 1.5e-22;
  Matches   65;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: |||  :|| || |   || |||||||:|||||  : ||||||:|
Db          1 SYELTQPPSVSVSPGQTASITCSGDKLGDKYACWYQQKPGQSPVLVIYQDSKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSS 95
              ||||:|||||:|||:| || ||||||| : |||
Db         61 FSGSNSGNTATLTISGTQAMDEADYYCQAWDSS 93


RESULT 44
L2HUMC
Ig lambda chain V-II region (Mcg) - human
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 24-Nov-1999
C;Accession: A90381; A01975
R;Fett, J.W.; Deutsch, H.F.
Biochemistry 13, 4102-4114, 1974
A;Title: Primary structure of the Mcg lambda chain.
A;Reference number: A90381; MUID:75013804; PMID:4415202
A;Accession: A90381
A;Molecule type: protein
A;Residues: 1-111 <FET>
A;Note: the C region of this chain has the Kern+ and Mcg+ markers
R;Fett, J.W.; Deutsch, H.F.
Immunochemistry 12, 643-652, 1975
A;Title: A new lambda-chain gene.
A;Reference number: A91745; MUID:76093781; PMID:812801
A;Contents: annotation; lambda chain genes
A;Note: the Mcg-type C region appears to be correlated with a very unusual V-region subs
R;Edmundson, A.B.; Ely, K.R.; Abola, E.E.; Schiffer, M.; Panagiotopoulos, N.
Biochemistry 14, 3953-3961, 1975
A;Title: Rotational allomerism and divergent evolution of domains in immunoglobulin ligh
A;Reference number: A90391
A;Contents: annotation; X-ray crystallography, 2.3 angstroms
C;Comment: This is a Bence Jones protein.
C;Genetics:
A;Gene: GDB:IGLV@
A;Cross-references: GDB:119342; OMIM:147240
A;Map position: 22q11.2-22q11.2
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into la
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: blocked amino end; heterotetramer
F;15-92/Domain: immunoglobulin homology <IMM>
F;1/Modified site: blocked amino end (Gln) (probably pyrrolidone carboxylic acid) #statu
F;22-90/Disulfide bonds: #status predicted

  Query Match             58.7%;  Score 342;  DB 1;  Length 111;
  Best Local Similarity   62.2%;  Pred. No. 1.8e-22;
  Matches   69;  Conservative   16;  Mismatches   22;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |: | :|||:| ::| | |  :  | | |||||  |:|| ::||  | ||||:|
Db          2 SALTQPPSASGSLGQSVTISCTGTSSDVGGYNYVSWYQQHAGKAPKVIIYEVNKRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||| |||||||::| |||||||||||| : | | :||| ||::||||
Db         62 DRFSGSKSGNTASLTVSGLQAEDEADYYCSSYEGSDN-FVFGTGTKVTVLG 111


RESULT 45
S16440
Ig lambda chain - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 21-Jan-2000
C;Accession: S16440
R;Combriato, G.; Klobeck, H.G.
Eur. J. Immunol. 21, 1513-1522, 1991
A;Title: V(lambda) and J(lambda)-C(lambda) gene segments of the human immunoglobulin lam
A;Reference number: S16439; MUID:91257162; PMID:1904362
A;Accession: S16440
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-114 <COM>
A;Cross-references: EMBL:X57826
C;Genetics:
A;Introns: 16/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-108/Domain: immunoglobulin homology <IMM>

  Query Match             58.7%;  Score 342;  DB 2;  Length 114;
  Best Local Similarity   69.9%;  Pred. No. 1.8e-22;
  Matches   65;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: |||  :|| || |   || |||||||:|||||  : ||||||:|
Db         20 SYELTQPPSVSVSPGQTASITCSGDKLGDKYACWYQQKPGQSPVLVIYQDSKRPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSS 95
              ||||:|||||:|||:| || ||||||| : |||
Db         80 FSGSNSGNTATLTISGTQAMDEADYYCQAWDSS 112
```

RESULT 46
S24319
Ig lambda chain precursor - human
C;Species: Homo sapiens (man)
C;Date: 02-Dec-1993 #sequence_revision 10-Nov-1995 #text_change 21-Jan-2000
C;Accession: S24319
R;Aucouturier, P.; Khamlichi, A.A.; Preud'homme, J.L.; Bauwens, M.; Touchard, G.; Cogne,
Biochem. J. 285, 149-152, 1992
A;Title: Complementary DNA sequence of human amyloidogenic immunoglobulin light-chain pr
A;Reference number: S24319; MUID:92344562; PMID:1379039
A;Accession: S24319
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-128 <AUC>
A;Cross-references: EMBL:X64132; NID:g32812; PIDN:CAA45493.1; PID:g32813
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-108/Domain: immunoglobulin homology <IMM>

[redacted]ery Match 58.5%; Score 341; DB 2; Length 128;
[redacted]t Local Similarity 63.2%; Pred. No. 2.5e-22;
Matches 67; Conservative 17; Mismatches 20; Indels 2; Gaps 1;

Qy 6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
Db 23 VTQPPSVSVAPGQTARITCGGNNIGSDSVHWHQQKSGQAPVLVIYDDSDRPSGIPERFSG 82

Qy 66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 83 STSGNTATLTISSVEAGDEADYYCQVWESSS--VIFGGGTKLTVLG 126

RESULT 47
S05270
Ig lambda chain precursor - human
C;Species: Homo sapiens (man)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 21-Jan-2000
C;Accession: S05270; S04601
R;Kishimoto, T.
submitted to the EMBL Data Library, March 1989
A;Reference number: S05270
A;Accession: S05270
A;Molecule type: mRNA
A;Residues: 1-235 <KIS1>
A;Cross-references: EMBL:X14583; NID:g33394; PIDN:CAA32725.1; PID:g33395
R;Kishimoto, T.; Okajima, H.; Okumoto, T.; Taniguchi, M.
Nucleic Acids Res. 17, 4385, 1989
A[redacted]itle: Nucleotide sequences of the cDNAs encoding the V-regions of H- and L-chains of
[redacted]ference number: S04601; MUID:89296497; PMID:2500644
A[redacted]ccession: S04601
A;Molecule type: mRNA
A;Residues: 1-130 <KIS2>
A;Cross-references: EMBL:X14583
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-235/Product: Ig lambda chain #status predicted <MAT>
F;150-218/Domain: immunoglobulin homology <IMM>

Query Match 58.3%; Score 340; DB 2; Length 235;
Best Local Similarity 62.7%; Pred. No. 5.5e-22;
Matches 69; Conservative 11; Mismatches 28; Indels 2; Gaps 1;

Qy 4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
Db 21 SVLTQPPSVSAAPGQKVTISCSGSSSNIGNNYVSWYQQLPGTAPKLLIYDNNKRPSGIPD 80

Qy 62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 81 RFSGSKSGTSATLGITGLQTGDEADYYCGTWDSSLSAGVFGGGTKLTVLG 130

RESULT 48
S51149
antibody light chain V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 07-May-1995 #sequence_revision 01-Sep-1995 #text_change 21-Jan-2000
C;Accession: S51149
R;de Kruif, J.; Boel, E.; Logtenberg, T.
submitted to the EMBL Data Library, January 1995
A;Description: Selection and application of human SCFV antibody fragments from a semi-sy
A;Reference number: S51147
A;Accession: S51149
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-110 <DEK>
A;Cross-references: EMBL:X83712
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;13-90/Domain: immunoglobulin homology <IMM>

Query Match 58.2%; Score 339.5; DB 2; Length 110;
Best Local Similarity 62.7%; Pred. No. 2.9e-22;
Matches 69; Conservative 16; Mismatches 20; Indels 5; Gaps 3;

Qy 5 ELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
Db 1 ELTQPPSVSGSPGQSITISCTGTSSDVGSYNLVSWYQQHPGKAPKLMIYEVSKRPSGVSN 60

Qy 62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 61 RFSGSKSGNTASLTISGLQAEDEADYYCCS--YAGSSWVFGGGTKLTVLG 108

RESULT 49
S47009
Ig lambda chain V1-J3 region - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 21-Jan-2000
C;Accession: S47009
R;Mahmoudi, M.; Gasyna, E.; Denomme, G.; Edwards, J.; Bell, D.; Cairns, E.
submitted to the EMBL Data Library, July 1994
A;Description: The role of the immunoglobulin heavy chain in human anti-DNA antibody bin
A;Reference number: S47009
A;Accession: S47009
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-111 <MAH>
A;Cross-references: EMBL:Z35495; NID:g517346; PIDN:CAA84629.1; PID:g517347
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-91/Domain: immunoglobulin homology <IMM>

Query Match 58.1%; Score 339; DB 2; Length 111;
Best Local Similarity 62.7%; Pred. No. 3.2e-22;
Matches 69; Conservative 11; Mismatches 28; Indels 2; Gaps 1;

Qy 4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
Db 2 SVLTQPPSVSAAPGQKVTISCSGSSSNIGNNYVSWYQQLPGTAPKLLIYENNKRPSGIPD 61

Qy 62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 62 RFSGSKSGTSATLGITGLQTGDEADYYCGTWDSSLSAGVFGGGTKLTVLG 111

RESULT 50
S78058
Ig lambda chain precursor V-J region (clone mAB 67VL) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 19-Nov-1997 #sequence_revision 05-Dec-1997 #text_change 23-Jul-1999
C;Accession: S78058; S23723
R;Harindranath, N.
submitted to the EMBL Data Library, August 1990
A;Reference number: S78051
A;Accession: S78058
A;Molecule type: mRNA

A;Residues: 1-129 <HAR>
A;Cross-references: EMBL:X54446; NID:g37923; PIDN:CAA38313.1; PID:g930121
R;Harindranath, N.; Goldfarb, I.S.; Ikematsu, H.; Burastero, S.E.; Wilder, R.L.; Notkins
Int. Immunol. 3, 865-875, 1991
A;Title: Complete sequence of the genes encoding the V(H) and V(L) regions of low- and h
patient.
A;Reference number: S23716; MUID:92031262; PMID:1718404
A;Accession: S23723
A;Molecule type: mRNA
A;Residues: 19-129 <HAW>
A;Cross-references: EMBL:X54446
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: immunoglobulin
F;1-18/Domain: signal sequence (fragment) #status predicted <SIG>
F;19-129/Product: Ig lambda chain (fragment) #status predicted <MAT>
F;33-109/Domain: immunoglobulin homology <IMM>

Query Match 58.1%; Score 339; DB 2; Length 129;
Best Local Similarity 60.0%; Pred. No. 3.7e-22;
Matches 66; Conservative 14; Mismatches 28; Indels 2; Gaps 1;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |: |   || | ::| | |  : | |  |||| || || |:||  | ||||:||
Db         20 SVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTAPKLLIYRNNQRPSGVPD 79

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :||| |:| ::|||||||:: | | : |||||||:|||||
Db         80 RFSGSKSGTSASLAISGLRSEDEADYYCAAWDDSLSGWVFGGGTKLTVLG 129
```

Search completed: November 26, 2003, 13:41:42
Job time : 13.8077 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:37:50 ; Search time 13.7564 Seconds
(without alignments)
341.405 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	551	94.5	278	3	US-09-260-527-3	Sequence 3, Appli
2	551	94.5	280	3	US-09-260-527-1	Sequence 1, Appli
3	551	94.5	309	4	US-09-079-029-9	Sequence 9, Appli
4	551	94.5	312	4	US-09-079-029-10	Sequence 10, Appl
5	535.5	91.9	109	2	US-08-665-202-34	Sequence 34, Appl
6	535.5	91.9	109	4	US-09-315-574-34	Sequence 34, Appl
7	524	89.9	109	2	US-08-652-816A-16	Sequence 16, Appl
8	489	83.9	97	2	US-08-665-202-35	Sequence 35, Appl
9	489	83.9	97	4	US-09-315-574-35	Sequence 35, Appl
10	484.5	83.1	104	4	US-08-793-450-2	Sequence 2, Appli
11	484.5	83.1	238	4	US-08-793-450-6	Sequence 6, Appli
12	478	82.0	104	3	US-09-240-274-49	Sequence 49, Appl
13	468	80.3	106	3	US-09-240-274-48	Sequence 48, Appl
14	466	79.9	106	3	US-09-240-274-50	Sequence 50, Appl
15	464	79.6	103	2	US-08-273-146-71	Sequence 71, Appl
16	461	79.1	106	3	US-09-240-274-47	Sequence 47, Appl
17	436.5	74.9	108	4	US-09-025-769B-20	Sequence 20, Appl
18	426.5	73.2	105	1	US-08-488-113B-157	Sequence 157, App
19	426.5	73.2	105	1	US-08-477-484B-157	Sequence 157, App
20	426.5	73.2	105	1	US-08-107-669D-21	Sequence 21, Appl
21	426.5	73.2	105	1	US-08-472-788A-21	Sequence 21, Appl
22	426.5	73.2	105	2	US-08-477-531B-21	Sequence 21, Appl
23	426.5	73.2	105	2	US-08-646-360-157	Sequence 157, App
24	426.5	73.2	105	2	US-08-082-842A-21	Sequence 21, Appl
25	426.5	73.2	105	3	US-08-839-765-157	Sequence 157, App
26	426.5	73.2	105	3	US-09-136-389-157	Sequence 157, App
27	426.5	73.2	105	4	US-09-610-838-157	Sequence 157, App
28	417	71.5	108	1	US-08-360-125-12	Sequence 12, Appl
29	417	71.5	108	2	US-08-450-578-12	Sequence 12, Appl
30	417	71.5	108	2	US-09-017-628-12	Sequence 12, Appl
31	417	71.5	108	2	US-09-014-880-12	Sequence 12, Appl
32	417	71.5	108	4	US-08-450-363-12	Sequence 12, Appl
33	407	69.8	109	3	US-09-157-370-5	Sequence 5, Appli
34	395	67.8	107	4	US-09-025-769B-34	Sequence 34, Appl
35	395	67.8	107	4	US-09-025-769B-55	Sequence 55, Appl
36	392.5	67.3	249	4	US-10-039-785-53	Sequence 53, Appl
37	385	66.0	109	1	US-08-478-039-91	Sequence 91, Appl
38	385	66.0	109	1	US-08-476-349A-91	Sequence 91, Appl
39	381.5	65.4	143	2	US-08-345-321-8	Sequence 8, Appli
40	379	65.0	108	1	US-08-259-372A-10	Sequence 10, Appl
41	379	65.0	108	1	US-08-468-671-10	Sequence 10, Appl
42	379	65.0	234	3	US-08-487-550-2	Sequence 2, Appli
43	379	65.0	234	4	US-09-526-098-2	Sequence 2, Appli
44	371	63.6	106	1	US-08-259-372A-16	Sequence 16, Appl
45	371	63.6	106	1	US-08-468-671-16	Sequence 16, Appl

ALIGNMENTS

RESULT 1
US-09-260-527-3
; Sequence 3, Application US/09260527A
; Patent No. 6228599
; GENERAL INFORMATION:
; APPLICANT: Knox, J.P.
; APPLICANT: Mikkelsen, J.D.
; APPLICANT: Willats, W. G.
; TITLE OF INVENTION: ANTIBODY
; FILE REFERENCE: DYOU19.001AUS
; CURRENT APPLICATION NUMBER: US/09/260,527A
; CURRENT FILING DATE: 1999-02-26
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 278
; TYPE: PRT
; ORGANISM: UNKNOWN
; FEATURE:
; OTHER INFORMATION: Anti-homogalacturonan specific antibodies selected
; OTHER INFORMATION: from a naive phage display library known as the
; OTHER INFORMATION: Synthetic scFv Library (#1) from the Centre for
; OTHER INFORMATION: Protein Engineering, MRC Centre, Cambridge, UK
US-09-260-527-3

Query Match 94.5%; Score 551; DB 3; Length 278;
Best Local Similarity 96.3%; Pred. No. 6e-45;
Matches 105; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db        153 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 212

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:|||||||| ||||||:|||||
Db        213 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVLG 261
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RESULT 2
US-09-260-527-1
; Sequence 1, Application US/09260527A
; Patent No. 6228599
; GENERAL INFORMATION:
; APPLICANT: Knox, J.P.
; APPLICANT: Mikkelsen, J.D.
; APPLICANT: Willats, W. G.
; TITLE OF INVENTION: ANTIBODY
; FILE REFERENCE: DYOU19.001AUS
; CURRENT APPLICATION NUMBER: US/09/260,527A
; CURRENT FILING DATE: 1999-02-26

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;  NUMBER OF SEQ ID NOS: 7
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
;   LENGTH: 280
;   TYPE: PRT
;   ORGANISM: UNKNOWN
;   FEATURE:
;   OTHER INFORMATION: Anti-homogalacturonan specific antibodies from a
;   OTHER INFORMATION: phage display library known as the Synthetic scFv
;   OTHER INFORMATION: Library (#1) from the Centre for Protein
;   OTHER INFORMATION: Engineering, MRC Centre, Cambridge, UK.
US-09-260-527-1

  Query Match             94.5%;  Score 551;  DB 3;  Length 280;
  Best Local Similarity   96.3%;  Pred. No. 6.1e-45;
  Matches  105;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db        155 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 214

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||:|||||||| ||||||:|||||
Db        215 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVLG 263


RESULT 3
US-09-079-029-9
; Sequence 9, Application US/09079029
; Patent No. 6342369
;  GENERAL INFORMATION:
;    APPLICANT:  Adams, Camilia W.
;    APPLICANT:  Ashkenazi, Avi J.
;    APPLICANT:  Chuntharapai, Anan
;    APPLICANT:  Kim, Kyung J.
;    TITLE OF INVENTION:  Apo-2 Receptor
;    NUMBER OF SEQUENCES:  14
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genentech, Inc.
;      STREET:  1 DNA Way
;      CITY:  South San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94080
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5 inch, 1.44 Mb floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  WinPatin (Genentech)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/079,029
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Marschang, Diane L.
;      REGISTRATION NUMBER:  35,600
;      REFERENCE/DOCKET NUMBER:  P1101R2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650/225-5416
;      TELEFAX:  650/952-9881
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  309 amino acids
;      TYPE:  Amino Acid
;      TOPOLOGY:  Linear
US-09-079-029-9

  Query Match             94.5%;  Score 551;  DB 4;  Length 309;
  Best Local Similarity   96.3%;  Pred. No. 6.8e-45;
  Matches  105;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db        175 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 234

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||:|||||||| ||||||:|||||
Db        235 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVLG 283


RESULT 4
US-09-079-029-10
; Sequence 10, Application US/09079029
; Patent No. 6342369
;  GENERAL INFORMATION:
;    APPLICANT:  Adams, Camilia W.
;    APPLICANT:  Ashkenazi, Avi J.
;    APPLICANT:  Chuntharapai, Anan
;    APPLICANT:  Kim, Kyung J.
;    TITLE OF INVENTION:  Apo-2 Receptor
;    NUMBER OF SEQUENCES:  14
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genentech, Inc.
;      STREET:  1 DNA Way
;      CITY:  South San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94080
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5 inch, 1.44 Mb floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  WinPatin (Genentech)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/079,029
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Marschang, Diane L.
;      REGISTRATION NUMBER:  35,600
;      REFERENCE/DOCKET NUMBER:  P1101R2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650/225-5416
;      TELEFAX:  650/952-9881
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  312 amino acids
;      TYPE:  Amino Acid
;      TOPOLOGY:  Linear
US-09-079-029-10

  Query Match             94.5%;  Score 551;  DB 4;  Length 312;
  Best Local Similarity   96.3%;  Pred. No. 6.9e-45;
  Matches  105;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db        178 SSELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 237

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||:|||||||| ||||||:|||||
Db        238 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLTVLG 286


RESULT 5
US-08-665-202-34
; Sequence 34, Application US/08665202
; Patent No. 5977322
;  GENERAL INFORMATION:
;    APPLICANT:  Marks, James D.
;    APPLICANT:  Schier, Robert
;    TITLE OF INVENTION:  No. 5977322el High Affinity Human Antibodies to
;    TITLE OF INVENTION:  Tumor Antigens
;    NUMBER OF SEQUENCES:  141
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
```

```
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/665,202
;      FILING DATE:  13-JUN-1996
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,238
;      FILING DATE:  14-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,250
;      FILING DATE:  15-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hunter, Tom
;      REGISTRATION NUMBER:  38,498
;      REFERENCE/DOCKET NUMBER:  02307E-061410
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 576-0200
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  109 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-665-202-34

  Query Match             91.9%;  Score 535.5;  DB 2;  Length 109;
  Best Local Similarity   93.6%;  Pred. No. 6.2e-44;
  Matches  102;  Conservative    5;  Mismatches    1;  Indels    1;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGN-HWVFGGGTELTVLG 111
              ||||||| |||||||||||||||||:||||||| :|||||||::||||
Db         61 SGSSSGNIASLTITGAQAEDEADYYCNSRDSSGNPYWVFGGGTKVTVLG 109


RESULT 6
US-09-315-574-34
; Sequence 34, Application US/09315574
; Patent No. 6512097
;  GENERAL INFORMATION:
;    APPLICANT:  Marks, James D.
;    APPLICANT:  Schier, Robert
;    TITLE OF INVENTION:  No. 6512097el High Affinity Human Antibodies to
;    TITLE OF INVENTION:  Tumor Antigens
;    NUMBER OF SEQUENCES:  141
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Majestic, Parsons, Siebert & Hsue P.C.
;      STREET:  Four Embarcadero Center, Suite 1100
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-4106
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/315,574
;      FILING DATE:  20-MAY-99
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,238
;      FILING DATE:  14-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,250
;      FILING DATE:  15-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/665,202
;      FILING DATE:  13-JUN-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hunter, Tom
;      REGISTRATION NUMBER:  38,498
;      REFERENCE/DOCKET NUMBER:  02307E-061411
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 576-0200
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  109 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-09-315-574-34

  Query Match             91.9%;  Score 535.5;  DB 4;  Length 109;
  Best Local Similarity   93.6%;  Pred. No. 6.2e-44;
  Matches  102;  Conservative    5;  Mismatches    1;  Indels    1;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGN-HWVFGGGTELTVLG 111
              ||||||| |||||||||||||||||:||||||| :|||||||::||||
Db         61 SGSSSGNIASLTITGAQAEDEADYYCNSRDSSGNPYWVFGGGTKVTVLG 109


RESULT 7
US-08-652-816A-16
; Sequence 16, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
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;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9525004.9
;      FILING DATE:  07-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9610824.6
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/GB92/02240
;      FILING DATE:  02-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/244,597
;      FILING DATE:  01-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  David W. Clough
;      REGISTRATION NUMBER:  36,107
;      REFERENCE/DOCKET NUMBER:  28111/33308
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-474-6300
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  109 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
US-08-652-816A-16

  Query Match             89.9%;  Score 524;  DB 2;  Length 109;
  Best Local Similarity   92.5%;  Pred. No. 7.6e-43;
  Matches   99;  Conservative    4;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              |||||||||||| ||||||:||||||||||||||||||| ||||||||||||||||||
Db          1 SSELTQDPAVSVPLGQTVRITCQGDSLRSYYASWYQQKPGQPPVLVIYGKNNRPSGIPDR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              |||||||||||||||||||||||||||:|||||||| |||||:| :
Db         61 FSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVVFGGGTKLEI 107


RESULT 8
US-08-665-202-35
; Sequence 35, Application US/08665202
; Patent No. 5977322
;  GENERAL INFORMATION:
;    APPLICANT:  Marks, James D.
;    APPLICANT:  Schier, Robert
;    TITLE OF INVENTION:  No. 5977322el High Affinity Human Antibodies to
;    TITLE OF INVENTION:  Tumor Antigens
;    NUMBER OF SEQUENCES:  141
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/665,202
;      FILING DATE:  13-JUN-1996
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,238
;      FILING DATE:  14-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,250
;      FILING DATE:  15-JUN-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hunter, Tom
;      REGISTRATION NUMBER:  38,498
;      REFERENCE/DOCKET NUMBER:  02307E-061410
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 576-0200
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  35:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  97 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-665-202-35

  Query Match             83.9%;  Score 489;  DB 2;  Length 97;
  Best Local Similarity   95.9%;  Pred. No. 1.4e-39;
  Matches   93;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              | ||||||||||||||:||||||||||||||||||||||||||||||||||||||||
Db          1 SSLTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWV 100
              |||||||||||||||||||||||||||:|||||||| |
Db         61 SGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVV 97


RESULT 9
US-09-315-574-35
; Sequence 35, Application US/09315574
; Patent No. 6512097
;  GENERAL INFORMATION:
;    APPLICANT:  Marks, James D.
;    APPLICANT:  Schier, Robert
;    TITLE OF INVENTION:  No. 6512097el High Affinity Human Antibodies to
;    TITLE OF INVENTION:  Tumor Antigens
;    NUMBER OF SEQUENCES:  141
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Majestic, Parsons, Siebert & Hsue P.C.
;      STREET:  Four Embarcadero Center, Suite 1100
;      CITY:  San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94111-4106
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/315,574
;      FILING DATE:  20-MAY-99
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,238
;      FILING DATE:  14-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/000,250
;      FILING DATE:  15-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/665,202
;      FILING DATE:  13-JUN-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hunter, Tom
;      REGISTRATION NUMBER:  38,498
;      REFERENCE/DOCKET NUMBER:  02307E-061411
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 576-0200
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  35:
```

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;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  97 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-09-315-574-35

  Query Match             83.9%;  Score 489;  DB 4;  Length 97;
  Best Local Similarity   95.9%;  Pred. No. 1.4e-39;
  Matches   93;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              | |||||||||||||||:|||||||||||||||||||||||||||||||||||||||||||
Db          1 SSLTQDPAVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWV 100
              ||||||||||||||||||||||||||:|||||||| |
Db         61 SGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHVV 97


RESULT 10
US-08-793-450-2
; Sequence 2, Application US/08793450
; Patent No. 6312690
;  GENERAL INFORMATION:
;    APPLICANT:  EDELMAN, LENA
;    APPLICANT:  MARGARITTE, CHRISTEL
;    APPLICANT:  KACZOREK, MICHEL
;    APPLICANT:  CHAABIHI, HASSAN
;    TITLE OF INVENTION:  MONOCLONAL RECOMBINANT ANTI-RHESUS D
;    TITLE OF INVENTION:
;    NUMBER OF SEQUENCES:  25
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,
;      ADDRESSEE:  P.C.
;      STREET:  1755 SOUTH JEFFERSON DAVIS HIGHWAY, SUITE 400
;      CITY:  ARLINGTON
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22202
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/793,450
;      FILING DATE:  03-MAR-1997
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  FR 94/10566
;      FILING DATE:  02-SEP-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  OBLON, NORMAN F.
;      REGISTRATION NUMBER:  24,618
;      REFERENCE/DOCKET NUMBER:  660-118-0 PCT
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-413-3000
;      TELEFAX:  703-413-2220
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  104 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-793-450-2

  Query Match             83.1%;  Score 484.5;  DB 4;  Length 104;
  Best Local Similarity   87.9%;  Pred. No. 4.1e-39;
  Matches   94;  Conservative    5;  Mismatches    3;  Indels    5;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||||||||||||||:||||||:||||||||||||||||||||||||||||||||||||
Db          3 ELTQDPAVSVALGQTVRITCQGDSLRTYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 62

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||:|:|        ||||||:|||||
Db         63 GSSSGNTASLTITGAQAEDEADYFCNSGGK-----VFGGGTKLTVLG 104


RESULT 11
US-08-793-450-6
; Sequence 6, Application US/08793450
; Patent No. 6312690
;  GENERAL INFORMATION:
;    APPLICANT:  EDELMAN, LENA
;    APPLICANT:  MARGARITTE, CHRISTEL
;    APPLICANT:  KACZOREK, MICHEL
;    APPLICANT:  CHAABIHI, HASSAN
;    TITLE OF INVENTION:  MONOCLONAL RECOMBINANT ANTI-RHESUS D
;    TITLE OF INVENTION:
;    NUMBER OF SEQUENCES:  25
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT,
;      ADDRESSEE:  P.C.
;      STREET:  1755 SOUTH JEFFERSON DAVIS HIGHWAY, SUITE 400
;      CITY:  ARLINGTON
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22202
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/793,450
;      FILING DATE:  03-MAR-1997
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  FR 94/10566
;      FILING DATE:  02-SEP-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  OBLON, NORMAN F.
;      REGISTRATION NUMBER:  24,618
;      REFERENCE/DOCKET NUMBER:  660-118-0 PCT
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-413-3000
;      TELEFAX:  703-413-2220
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  238 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-793-450-6

  Query Match             83.1%;  Score 484.5;  DB 4;  Length 238;
  Best Local Similarity   87.9%;  Pred. No. 1e-38;
  Matches   94;  Conservative    5;  Mismatches    3;  Indels    5;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||||||||||||||:||||||:||||||||||||||||||||||||||||||||||||
Db         22 ELTQDPAVSVALGQTVRITCQGDSLRTYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 81

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||:|:|        ||||||:|||||
Db         82 GSSSGNTASLTITGAQAEDEADYFCNSGGK-----VFGGGTKLTVLG 123


RESULT 12
US-09-240-274-49
; Sequence 49, Application US/09240274
; Patent No. 6255455
; GENERAL INFORMATION:
```

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;  APPLICANT: Siegel, Donald L.
;  TITLE OF INVENTION: Rh(D)-BINDING PROTEINS AND MAGNETICALLY ACTIVATED CELL
;  TITLE OF INVENTION: SORTING METHOD FOR PRODUCTION THEREOF
;  FILE REFERENCE: 09596-42U2
;  CURRENT APPLICATION NUMBER: US/09/240,274
;  CURRENT FILING DATE: 1999-01-29
;  EARLIER APPLICATION NUMBER: 60/081,380
;  EARLIER FILING DATE: 1998-04-10
;  EARLIER APPLICATION NUMBER: 60/028,550
;  EARLIER FILING DATE: 1996-10-11
;  NUMBER OF SEQ ID NOS: 224
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 49
;   LENGTH: 104
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: anti-Rh(D) chain J04
US-09-240-274-49

  Query Match             82.0%;  Score 478;  DB 3;  Length 104;
  Best Local Similarity   90.3%;  Pred. No. 1.7e-38;
  Matches   93;  Conservative    3;  Mismatches    5;  Indels    2;  Gaps    1;

Qy          8 QDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSS 67
              ||| |||||||||||:|||||||||||||||||||||||||||||:|||||||||||||
Db          4 QDPVVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNSRPSGIPDRFSGSS 63

Qy         68 SGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||||||||||||||||||||||| |   |  |||||:||||
Db         64 SGNTASLTITGAQAEDEADYYCSSRGSP--HVAFGGGTKLTVL 104


RESULT 13
US-09-240-274-48
; Sequence 48, Application US/09240274
; Patent No. 6255455
; GENERAL INFORMATION:
;  APPLICANT: Siegel, Donald L.
;  TITLE OF INVENTION: Rh(D)-BINDING PROTEINS AND MAGNETICALLY ACTIVATED CELL
;  TITLE OF INVENTION: SORTING METHOD FOR PRODUCTION THEREOF
;  FILE REFERENCE: 09596-42U2
;  CURRENT APPLICATION NUMBER: US/09/240,274
;  CURRENT FILING DATE: 1999-01-29
;  EARLIER APPLICATION NUMBER: 60/081,380
;  EARLIER FILING DATE: 1998-04-10
;  EARLIER APPLICATION NUMBER: 60/028,550
;  EARLIER FILING DATE: 1996-10-11
;  NUMBER OF SEQ ID NOS: 224
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
;   LENGTH: 106
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: anti-Rh(D) chain J02
US-09-240-274-48

  Query Match             80.3%;  Score 468;  DB 3;  Length 106;
  Best Local Similarity   85.4%;  Pred. No. 1.5e-37;
  Matches   88;  Conservative    6;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          8 QDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSS 67
              ||| |||||||||||:||||| |||||||||||||||| ||:||:|||||||||||||||
Db          4 QDPVVSVALGQTVRITCQGDGLRSYYASWYQQKPGQAPKLVMYGRNNRPSGIPDRFSGSS 63

Qy         68 SGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              || ||:||||| |||||||||| || :|||  ||||||:||||
Db         64 SGQTAALTITGTQAEDEADYYCQSRATSGNPVVFGGGTKLTVL 106


RESULT 14
US-09-240-274-50
; Sequence 50, Application US/09240274
; Patent No. 6255455
; GENERAL INFORMATION:
;  APPLICANT: Siegel, Donald L.
;  TITLE OF INVENTION: Rh(D)-BINDING PROTEINS AND MAGNETICALLY ACTIVATED CELL
;  TITLE OF INVENTION: SORTING METHOD FOR PRODUCTION THEREOF
;  FILE REFERENCE: 09596-42U2
;  CURRENT APPLICATION NUMBER: US/09/240,274
;  CURRENT FILING DATE: 1999-01-29
;  EARLIER APPLICATION NUMBER: 60/081,380
;  EARLIER FILING DATE: 1998-04-10
;  EARLIER APPLICATION NUMBER: 60/028,550
;  EARLIER FILING DATE: 1996-10-11
;  NUMBER OF SEQ ID NOS: 224
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
;   LENGTH: 106
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: anti-Rh(D) chain J05
US-09-240-274-50

  Query Match             79.9%;  Score 466;  DB 3;  Length 106;
  Best Local Similarity   83.5%;  Pred. No. 2.4e-37;
  Matches   86;  Conservative    9;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          8 QDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSS 67
              ||| |||||||||::|||||||| |||||||||||||||| | :|:|||||||||||:
Db          4 QDPVVSVALGQTVKITCQGDSLRKYYASWYQQKPGQAPVLVFYARNSRPSGIPDRFSGSN 63

Qy         68 SGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              || |||||| ||:||||||||| ||||:|:| ||||||:||||
Db         64 SGTTASLTIAGARAEDEADYYCHSRDSNGHHRVFGGGTKLTVL 106


RESULT 15
US-08-273-146-71
; Sequence 71, Application US/08273146
; Patent No. 5855885
;  GENERAL INFORMATION:
;    APPLICANT:  Smith, Rodger
;    APPLICANT:  McCafferty, John
;    APPLICANT:  Chiswell, David
;    APPLICANT:  Darsley, Michael J.
;    APPLICANT:  Fitzgerald, Kevin
;    APPLICANT:  Kenten, John H.
;    APPLICANT:  Martin, Mark T.
;    APPLICANT:  Titmas, Richard C.
;    APPLICANT:  Williams, Richard O.
;    TITLE OF INVENTION:  The Isolation and Production of
;    TITLE OF INVENTION:  Catalytic Antibodies using Phage Technology
;    NUMBER OF SEQUENCES:  71
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  IGEN, Inc.
;      STREET:  1530 East Jefferson St.
;      CITY:  Rockville
;      STATE:  MD
;      COUNTRY:  USA
;      ZIP:  20852
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/273,146
;      FILING DATE:  14-JUL-1994
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Ryan, John W.
;      REGISTRATION NUMBER:  33,771
;      REFERENCE/DOCKET NUMBER:  09000
```

```
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  301-984-8000
;      TELEFAX:  301-230-0158
;  INFORMATION FOR SEQ ID NO:  71:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  103 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-273-146-71

  Query Match            79.6%;  Score 464;  DB 2;  Length 103;
  Best Local Similarity   90.8%;  Pred. No. 3.5e-37;
  Matches   89;  Conservative    2;  Mismatches    7;  Indels    0;  Gaps    0;

Qy         14 VALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGNTAS 73
              ||||||||:|||||||||||||||||||||||||| |||||||||||||:|||||||
Db          6 VALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVISGKNNRPSGIPDRFSASSSGNTAS 65

Qy         74 LTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||| |||| | ||||||:|||||
Db         66 LTITGAQAEDEADYYCLSRDSGSNQLVFGGGTKLTVLG 103


RESULT 16
US-09-240;274-47
; Sequence 47, Application US/09240274
; Patent No. 6255455
; GENERAL INFORMATION:
;  APPLICANT: Siegel, Donald L.
;  TITLE OF INVENTION: Rh(D)-BINDING PROTEINS AND MAGNETICALLY ACTIVATED CELL
;  TITLE OF INVENTION: SORTING METHOD FOR PRODUCTION THEREOF
;  FILE REFERENCE: 09596-42U2
;  CURRENT APPLICATION NUMBER: US/09/240,274
;  CURRENT FILING DATE: 1999-01-29
;  EARLIER APPLICATION NUMBER: 60/081,380
;  EARLIER FILING DATE: 1998-04-10
;  EARLIER APPLICATION NUMBER: 60/028,550
;  EARLIER FILING DATE: 1996-10-11
;  NUMBER OF SEQ ID NOS: 224
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 47
;   LENGTH: 106
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: anti-Rh(D) chain J01
US-09-240-274-47

  Query Match            79.1%;  Score 461;  DB 3;  Length 106;
  Best Local Similarity   84.5%;  Pred. No. 7e-37;
  Matches   87;  Conservative    6;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          8 QDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSS 67
              ||| |||||||||:||||| |||||||||||||||| ||:||:|||||||| ||||||
Db          4 QDPVVSVALGQTVRITCQGDGLRSYYASWYQQKPGQAPKLVMYGRNNRPSGIPGRFSGSS 63

Qy         68 SGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              || ||:||||| |||||||||| || :||| ||||||:||||
Db         64 SGQTAALTITGTQAEDEADYYCQSRATSGNPVVFGGGTKLTVL 106


RESULT 17
US-09-025-769B-20
; Sequence 20, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11 3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-20

  Query Match            74.9%;  Score 436.5;  DB 4;  Length 108;
  Best Local Similarity   80.4%;  Pred. No. 1.5e-34;
  Matches   86;  Conservative    7;  Mismatches   13;  Indels    1;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||| ||| |:|| |||| | ||||||||||||||||  | ||||||:|||
Db          2 ELTQPPSVSVAPGQTARITCSGDSLGSKYASWYQQKPGQAPVLVIYDDNKRPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||:|||||:|||:| |||||||||| | |||||  ||||||:|||||
Db         62 GSNSGNTATLTISGVQAEDEADYYCQSWDSSGN-VVFGGGTKLTVLG 107


RESULT 18
US-08-488-113B-157
; Sequence 157, Application US/08488113B
; Patent No. 5744580
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      APPLICATION NUMBER:  US/08/488,113B
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US07/200-70.P3.C2A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  157:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-488-113B-157

  Query Match             73.2%;  Score 426.5;  DB 1;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


ULT 19
US-08-477-484B-157
; Sequence 157, Application US/08477484B
; Patent No. 5756699
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,484B
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US07/200-70.P3.C2A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  157:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-477-484B-157

  Query Match             73.2%;  Score 426.5;  DB 1;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 20
US-08-107-669D-21
; Sequence 21, Application US/08107669D
; Patent No. 5766886
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains (as amended)
;    NUMBER OF SEQUENCES:  67
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  United States of America
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/107,669D
;      FILING DATE:  13-AUG-1993
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/10906
```

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;      FILING DATE:  14-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/808,464
;      FILING DATE:  13-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Michele A. Cimbala
;      REGISTRATION NUMBER:  33,851
;      REFERENCE/DOCKET NUMBER:  0610.1000001/MAC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-107-669D-21

  Query Match           73.2%;  Score 426.5;  DB 1;  Length 105;
  Best Local Similarity  80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 21
US-08-472-788A-21
; Sequence 21, Application US/08472788A
; Patent No. 5770196
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains
;    NUMBER OF SEQUENCES:  89
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/472,788A
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/082,842
;      FILING DATE:  23-JUN-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/10906
;      FILING DATE:  14-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/808,464
;      FILING DATE:  13-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cimbala, Michele A.
;      REGISTRATION NUMBER:  33,851
;      REFERENCE/DOCKET NUMBER:  0610.1000003
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-472-788A-21

  Query Match           73.2%;  Score 426.5;  DB 1;  Length 105;
  Best Local Similarity  80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 22
US-08-477-531B-21
; Sequence 21, Application US/08477531B
; Patent No. 5821123
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains (as amended)
;    NUMBER OF SEQUENCES:  67
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  United States of America
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,531B
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  436
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/107,669
;      FILING DATE:  13-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/10906
;      FILING DATE:  14-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/808,464
;      FILING DATE:  13-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Michele A. Cimbala
;      REGISTRATION NUMBER:  33,851
;      REFERENCE/DOCKET NUMBER:  0610.1000004/MAC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-477-531B-21

  Query Match           73.2%;  Score 426.5;  DB 2;  Length 105;
  Best Local Similarity  80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;
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Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 23
US-08-646-360-157
; Sequence 157, Application US/08646360
; Patent No. 5837491
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  173
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,360
;      FILING DATE:  13-MAY-1996
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US94/05348
;      FILING DATE:  12-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  200-70.P4
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  157:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-646-360-157

  Query Match             73.2%;  Score 426.5;  DB 2;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 24
US-08-082-842A-21
; Sequence 21, Application US/08082842A
; Patent No. 5869619
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains
;    NUMBER OF SEQUENCES:  89
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/082,842A
;      FILING DATE:  23-JUN-1993
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/10906
;      FILING DATE:  14-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/808,464
;      FILING DATE:  13-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cimbala, Michele A.
;      REGISTRATION NUMBER:  33,851
;      REFERENCE/DOCKET NUMBER:  0610.1000002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-082-842A-21

  Query Match             73.2%;  Score 426.5;  DB 2;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 25
US-08-839-765-157
; Sequence 157, Application US/08839765
; Patent No. 6146631
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
```

```
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/839,765
;      FILING DATE:  15-APR-1997
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US09/200-70.P3.C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  157:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-839-765-157

  Query Match             73.2%;  Score 426.5;  DB 3;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 26
US-09-136-389-157
; Sequence 157, Application US/09136389
; Patent No. 6146850
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  173
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/136,389
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/646,360
;      FILING DATE:  13-MAY-1996
;      APPLICATION NUMBER:  PCT/US94/05348
;      FILING DATE:  12-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  200-70.P4
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  157:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  105 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-136-389-157

  Query Match             73.2%;  Score 426.5;  DB 3;  Length 105;
  Best Local Similarity   80.6%;  Pred. No. 1.3e-33;
  Matches   87;  Conservative    8;  Mismatches   10;  Indels    3;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | ||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              -||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105


RESULT 27
US-09-610-838-157
; Sequence 157, Application US/09610838
; Patent No. 6376217
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
```

; APPLICANT: Carroll, Stephen F.
; APPLICANT: Studnika, Gary M.
; TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
; TITLE OF INVENTION: Proteins
; NUMBER OF SEQUENCES: 173
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/610,838
; FILING DATE: 06-JUL-2000
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/136,389
; FILING DATE: 18-AUG-1998
; APPLICATION NUMBER: 08/646,360
; FILING DATE: 13-MAY-1996
; APPLICATION NUMBER: PCT/US94/05348
; FILING DATE: 12-MAY-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/064,691
; FILING DATE: 12-MAY-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/988,430
; FILING DATE: 09-DEC-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/901,707
; FILING DATE: 19-JUN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/787,567
; FILING DATE: 04-NOV-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McNicholas, Janet M.
; REGISTRATION NUMBER: 32,918
; REFERENCE/DOCKET NUMBER: 200-70.P4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9155
; TELEX: 650 388-1248
; INFORMATION FOR SEQ ID NO: 157:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 105 amino acids
; TYPE: amino acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-610-838-157

Query Match 73.2%; Score 426.5; DB 4; Length 105;
Best Local Similarity 80.6%; Pred. No. 1.3e-33;
Matches 87; Conservative 8; Mismatches 10; Indels 3; Gaps 3;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||| ||| |:|| || |  | | |||||||||||:|||||: ||||||||||
Db          1 SELTQPPSVSVAPGQT-RITCSGDXLGXYDAXWYQQKPGQAPLLVIYGR-NRPSGIPDRF 58

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:||||||||||||||||||:||||||   :|||||:|||||
Db         59 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGK-VLFGGGTKLTVLG 105
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RESULT 28
US-08-360-125-12
; Sequence 12, Application US/08360125

; Patent No. 5767246
; GENERAL INFORMATION:
; APPLICANT: Saiko HOSOKAWA
; APPLICANT: Toshiaki TAGAWA
; APPLICANT: Yoko HIRAKAWA
; APPLICANT: No. 5767246ihiko ITO
; APPLICANT: Kazuhiro NAGAIKE
; TITLE OF INVENTION: Human Monoclonal Antibody
; TITLE OF INVENTION: Specifically Binding to Surface Antigen of Cancer
; TITLE OF INVENTION: Cell Membrane
; NUMBER OF SEQUENCES: 42
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wenderoth, Lind & Ponack
; STREET: 805 Fifteenth Street, N.W., #700
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 500 kb
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/360,125
; FILING DATE:
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/905,534
; FILING DATE: June 29, 1992
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Warren M. Cheek, Jr.
; REGISTRATION NUMBER: 33,367
; REFERENCE/DOCKET NUMBER:
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-8850
; TELEFAX:
; TELEX:
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 108 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL:
; ANTI-SENSE:
; FRAGMENT TYPE:
; ORIGINAL SOURCE:
; ORGANISM:
; STRAIN:
; INDIVIDUAL ISOLATE:
; DEVELOPMENTAL STAGE:
; HAPLOTYPE:
; TISSUE TYPE:
; CELL TYPE: Hybridoma producing human antibody 1-3-1
; CELL LINE:
; ORGANELLE:
; IMMEDIATE SOURCE:
; LIBRARY:
; CLONE:
; POSITION IN GENOME:
; CHROMOSOME/SEGMENT:
; MAP POSITION:
; UNITS:
; FEATURE:
; NAME/KEY:
; LOCATION:
; IDENTIFICATION METHOD:
; OTHER INFORMATION:
; PUBLICATION INFORMATION:

```
;      AUTHORS:
;      TITLE:
;      JOURNAL:
;      VOLUME:
;      ISSUE:
;      PAGES:
;      DATE:
;      DOCUMENT NUMBER:
;      FILING DATE:
;      PUBLICATION DATE:
;      RELEVANT RESIDUES IN SEQ ID NO:
US-08-360-125-12

  Query Match             71.5%;  Score 417;  DB 1;  Length 108;
  Best Local Similarity   73.8%;  Pred. No. 1.1e-32;
  Matches   79;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  : ||||||:|||
Db          2 ELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| | :|||:| |||||||||| | |||| : ||||||:|||||
Db         62 GSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYEVFGGGTKLTVLG 108


RESULT 29
US-08-450-578-12
; Sequence 12, Application US/08450578
; Patent No. 5837845
;  GENERAL INFORMATION:
;    APPLICANT:  Saiko HOSOKAWA
;    APPLICANT:  Toshiaki TAGAWA
;    APPLICANT:  Yoko HIRAKAWA
;    APPLICANT:  No. 5837845ihiko ITO
;    APPLICANT:  Kazuhiro NAGAIKE
;    TITLE OF INVENTION:  Human Monoclonal Antibody
;    TITLE OF INVENTION:  Specifically Binding to Surface Antigen of Cancer
;    TITLE OF INVENTION:  Cell Membrane
;    NUMBER OF SEQUENCES:  42
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Wenderoth, Lind & Ponack
;      STREET:  805 Fifteenth Street, N.W., #700
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  U.S.A.
;      ZIP:  20005
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 5.25 inch, 500 kb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/450,578
;      FILING DATE:  May 25, 1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/360,125
;      FILING DATE:  December 20, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/905,534
;      FILING DATE:  June 29, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warren M. Cheek, Jr.
;      REGISTRATION NUMBER:  33,367
;      REFERENCE/DOCKET NUMBER:
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-371-8850
;      TELEFAX:
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:
;    ANTI-SENSE:
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;      ORGANISM:
;      STRAIN:
;      INDIVIDUAL ISOLATE:
;      DEVELOPMENTAL STAGE:
;      HAPLOTYPE:
;      TISSUE TYPE:
;      CELL TYPE:  Hybridoma producing human antibody 1-3-1
;      CELL LINE:
;      ORGANELLE:
;    IMMEDIATE SOURCE:
;      LIBRARY:
;      CLONE:
;    POSITION IN GENOME:
;      CHROMOSOME/SEGMENT:
;      MAP POSITION:
;      UNITS:
;    FEATURE:
;      NAME/KEY:
;      LOCATION:
;      IDENTIFICATION METHOD:
;      OTHER INFORMATION:
;    PUBLICATION INFORMATION:
;      AUTHORS:
;      TITLE:
;      JOURNAL:
;      VOLUME:
;      ISSUE:
;      PAGES:
;      DATE:
;      DOCUMENT NUMBER:
;      FILING DATE:
;      PUBLICATION DATE:
;      RELEVANT RESIDUES IN SEQ ID NO:
US-08-450-578-12

  Query Match             71.5%;  Score 417;  DB 2;  Length 108;
  Best Local Similarity   73.8%;  Pred. No. 1.1e-32;
  Matches   79;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  : ||||||:|||
Db          2 ELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| | :|||:| |||||||||| | |||| : ||||||:|||||
Db         62 GSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYEVFGGGTKLTVLG 108


RESULT 30
US-09-017-628-12
; Sequence 12, Application US/09017628
; Patent No. 5990287
; GENERAL INFORMATION:
;  APPLICANT: HOSOKAWA, Saiko
;  APPLICANT: TAGAWA, Toshiaki
;  APPLICANT: HIRAKAWA, Yoko
;  APPLICANT: ITO, No. 5990287ihiko
;  APPLICANT: NAGAIKE, Kazuhiro
;  TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY SPECIFICALLY BINDING TO
;  TITLE OF INVENTION: SURFACE ANTIGEN OF CANCER CELL MEMBRANE
;  FILE REFERENCE: 177/527361KH
;  CURRENT APPLICATION NUMBER: US/09/017,628
;  CURRENT FILING DATE: 1998-02-02
;  EARLIER APPLICATION NUMBER: 08/360,125
;  EARLIER FILING DATE: 1994-12-20
```

```
;  NUMBER OF SEQ ID NOS: 42
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 12
;   LENGTH: 108
;   TYPE: PRT
;   ORGANISM: Unknown
;   FEATURE:
;   OTHER INFORMATION: Hybridoma producing human antibody 1-3-1
US-09-017-628-12

  Query Match             71.5%;  Score 417;  DB 2;  Length 108;
  Best Local Similarity   73.8%;  Pred. No. 1.1e-32;
  Matches   79;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  : ||||||:|||
Db          2 ELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| | :|||:| |||||||||| | |||| : ||||||:|||||
Db         62 GSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYEVFGGGTKLTVLG 108


RESULT 31
US-09-014-880-12
; Sequence 12, Application US/09014880
; Patent No. 5990297
;  GENERAL INFORMATION:
;    APPLICANT:  Saiko HOSOKAWA et al.
;    TITLE OF INVENTION:  HUMAN MONOCLONAL ANTIBODY SPECIFICALLY
;    TITLE OF INVENTION:  BINDING TO SURFACE ANTIGEN OF CANCER CELL MEMBRANE
;    NUMBER OF SEQUENCES:  42
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Wenderoth, Lind & Ponack, L.L.P.
;      STREET:  2033 K Street, N.W., #800
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  U.S.A.
;      ZIP:  20006
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 1.44 mb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  Wordperfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/014,880
;      FILING DATE:  January 28, 1998
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/450,578
;      FILING DATE:  May 25, 1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/360,125
;      FILING DATE:  December 20, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/905,534
;      FILING DATE:  June 29, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warren M. Cheek, Jr.
;      REGISTRATION NUMBER:  33,367
;      REFERENCE/DOCKET NUMBER:
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-721-8200
;      TELEFAX:  202-721-8250
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    ORIGINAL SOURCE:
;      CELL TYPE:  Hybridoma producing human antibody 1-3-1
US-09-014-880-12

  Query Match             71.5%;  Score 417;  DB 2;  Length 108;
  Best Local Similarity   73.8%;  Pred. No. 1.1e-32;
  Matches   79;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  : ||||||:|||
Db          2 ELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| | :|||:| |||||||||| | |||| : ||||||:|||||
Db         62 GSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYEVFGGGTKLTVLG 108


RESULT 32
US-08-450-363-12
; Sequence 12, Application US/08450363
; Patent No. 6436434
;  GENERAL INFORMATION:
;    APPLICANT:  Saiko HOSOKAWA
;    APPLICANT:  Toshiaki TAGAWA
;    APPLICANT:  Yoko HIRAKAWA
;    APPLICANT:  No. 6436434ihiko ITO
;    APPLICANT:  Kazuhiro NAGAIKE
;    TITLE OF INVENTION:  Human Monoclonal Antibody
;    TITLE OF INVENTION:  Specifically Binding to Surface Antigen of Cancer
;    TITLE OF INVENTION:  Cell Membrane
;    NUMBER OF SEQUENCES:  42
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Wenderoth, Lind & Ponack
;      STREET:  805 Fifteenth Street, N.W., #700
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  U.S.A.
;      ZIP:  20005
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 5.25 inch, 500 kb
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/450,363
;      FILING DATE:  May 25, 1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/360,125
;      FILING DATE:  December 20, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/905,534
;      FILING DATE:  June 29, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warren M. Cheek, Jr.
;      REGISTRATION NUMBER:  33,367
;      REFERENCE/DOCKET NUMBER:
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-371-8850
;      TELEFAX:
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:
;    ANTI-SENSE:
;    FRAGMENT TYPE:
;    ORIGINAL SOURCE:
;      ORGANISM:
;      STRAIN:
```

```
;       INDIVIDUAL ISOLATE:
;       DEVELOPMENTAL STAGE:
;       HAPLOTYPE:
;       TISSUE TYPE:
;       CELL TYPE:  Hybridoma producing human antibody 1-3-1
;       CELL LINE:
;       ORGANELLE:
;     IMMEDIATE SOURCE:
;       LIBRARY:
;       CLONE:
;     POSITION IN GENOME:
;       CHROMOSOME/SEGMENT:
;       MAP POSITION:
;       UNITS:
;     FEATURE:
;       NAME/KEY:
;       LOCATION:
;       IDENTIFICATION METHOD:
;       OTHER INFORMATION:
;     PUBLICATION INFORMATION:
;       AUTHORS:
;       TITLE:
;       JOURNAL:
;       VOLUME:
;       ISSUE:
;       PAGES:
;       DATE:
;       DOCUMENT NUMBER:
;       FILING DATE:
;       PUBLICATION DATE:
;       RELEVANT RESIDUES IN SEQ ID NO:
US-08-450-363-12

  Query Match             71.5%;  Score 417;  DB 4;  Length 108;
  Best Local Similarity   73.8%;  Pred. No. 1.1e-32;
  Matches   79;  Conservative   10;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||:|    || ||||||||||||||  : ||||||:|||
Db      -   2 ELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDSERPSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| | :|||:| |||||||||| | |||| : ||||||:|||||
Db         62 GSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYEVFGGGTKLTVLG 108


RESULT 33
US-09-157-370-5
; Sequence 5, Application US/09157370A
; Patent No. 6262238
; GENERAL INFORMATION:
;  APPLICANT: STEIPE, Boris
;  APPLICANT: STEINBACHER, Stefan
;  TITLE OF INVENTION: PROCESS FOR MODIFYING THE STABILITY OF ANTIBODIES
;  FILE REFERENCE: P8341-8072
;  CURRENT APPLICATION NUMBER: US/09/157,370A
;  CURRENT FILING DATE: 1998-09-21
;  EARLIER APPLICATION NUMBER: 08/765,179
;  EARLIER FILING DATE: 1997-01-14
;  EARLIER APPLICATION NUMBER: PCT/EP95/02626
;  EARLIER FILING DATE: 1995-07-06
;  EARLIER APPLICATION NUMBER: DE/P44 25 115.7
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 10
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
;   LENGTH: 109
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-157-370-5

  Query Match             69.8%;  Score 407;  DB 3;  Length 109;
  Best Local Similarity   75.9%;  Pred. No. 9.7e-32;
  Matches   82;  Conservative    6;  Mismatches   18;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||||| |:|||: |||| ::| ||||    | |||||||||| ||||  | |||||||||
Db          2 SELTQPPSVSVSPGQTVTISCSGDSLGIGYVSWYQQKPGQAPKLVIYDDNKRPSGIPDRF 61

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||| |||||||||:| |||||||||| | |||    ||||||:|||||
Db         62 SGSKSGNTASLTISGLQAEDEADYYCQSWDSSS--VVFGGGTKLTVLG 107


RESULT 34
US-09-025-769B-34
; Sequence 34, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11´3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  34:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  107 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-34

  Query Match             67.8%;  Score 395;  DB 4;  Length 107;
  Best Local Similarity   69.0%;  Pred. No. 1.3e-30;
  Matches   78;  Conservative   12;  Mismatches   13;  Indels   10;  Gaps    2;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||| ||| |::| ||:|   |||||||||||||||||  ::|||||:|
Db          1 SYELTQPPSVSVAPGQTARISCSGDALGDKYASWYQQKPGQAPVLVIYDDSDRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW----VFGGGTELTVLG 111
              ||||:|||||:|||:| ||||||||||        |:    |||||:|||||
Db         61 FSGSNSGNTATLTISGTQAEDEADYYCQ------QHYTTPPVFGGGTKLTVLG 107


RESULT 35
US-09-025-769B-55
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; Sequence 55, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11 3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  55:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  107 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-55

  Query Match             67.8%;  Score 395;  DB 4;  Length 107;
  Best Local Similarity   69.0%;  Pred. No. 1.3e-30;
  Matches   78;  Conservative   12;  Mismatches   13;  Indels   10;  Gaps    2;

Qy           3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
               | |||| |:|||| ||| |::| ||:|   |||||||||||||||||  ::|||||:|
Db           1 SYELTQPPSVSVAPGQTARISCSGDALGDKYASWYQQKPGQAPVLVIYDDSDRPSGIPER 60

Qy          63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW----VFGGGTELTVLG 111
               ||||:|||||:|||:| ||||||||||        |:    ||||||:|||||
Db          61 FSGSNSGNTATLTISGTQAEDEADYYCQ------QHYTTPPVFGGGTKLTVLG 107


RESULT 36
US-10-039-785-53
; Sequence 53, Application US/10039785
; Patent No. 6538938
; GENERAL INFORMATION:
;  APPLICANT: Salcedo et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind to TRAIL
;  TITLE OF INVENTION:  Receptors
;  FILE REFERENCE: PF550
;  CURRENT APPLICATION NUMBER: US/10/039,785
;  CURRENT FILING DATE:  2002-05-07
;  PRIOR APPLICATION NUMBER: 60/369,860
;  PRIOR FILING DATE: 2002-04-05
;  PRIOR APPLICATION NUMBER: 60/341,237
;  PRIOR FILING DATE: 2001-12-20
;  PRIOR APPLICATION NUMBER: 60/331,310
;  PRIOR FILING DATE: 2001-11-14
;  PRIOR APPLICATION NUMBER: 60/331,044
;  PRIOR FILING DATE: 2001-11-07
;  PRIOR APPLICATION NUMBER: 60/327,364
;  PRIOR FILING DATE: 2001-10-09
;  PRIOR APPLICATION NUMBER: 60/323,807
;  PRIOR FILING DATE: 2001-09-21
;  PRIOR APPLICATION NUMBER: 60/309,176
;  PRIOR FILING DATE: 2001-08-02
;  PRIOR APPLICATION NUMBER: 60/294,981
;  PRIOR FILING DATE: 2001-06-04
;  PRIOR APPLICATION NUMBER: 60/293,473
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 53
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: T1006F07 scFv
US-10-039-785-53

  Query Match             67.3%;  Score 392.5;  DB 4;  Length 249;
  Best Local Similarity   69.4%;  Pred. No. 5.8e-30;
  Matches   75;  Conservative   13;  Mismatches   19;  Indels    1;  Gaps    1;

Qy           4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
               | ||| |:|||: ||  |:|| || |   |||||||:|||:||||||  | ||||||:||
Db         143 SVLTQPPSVSVSPGQAARITCSGDKLGDKYASWYQQRPGQSPVLVIYQDNKRPSGIPERF 202

Qy          64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               |||:|||||:| |:| || ||||||| : ||| : |||||||::||||
Db         203 SGSNSGNTATLKISGTQAMDEADYYCLAWDSSAD-WVFGGGTKVTVLG 249


RESULT 37
US-08-478-039-91
; Sequence 91, Application US/08478039
; Patent No. 5681722
;  GENERAL INFORMATION:
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Raab, Ronald W.
;    TITLE OF INVENTION:  Recombinant Antibodies for Human Therapy
;    NUMBER OF SEQUENCES:  114
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince St.
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22313-1404
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/478,039
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/379,072
;      FILING DATE:  25-JAN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/912,292
;      FILING DATE:  10-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/856,281
;      FILING DATE:  23-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/735,064
```

```
;      FILING DATE:  25-JUL-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin Esq., Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-160
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  109 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  not relevant
;    MOLECULE TYPE:  peptide
;    ORIGINAL SOURCE:
;      ORGANISM:  Homo sapiens
;    POSITION IN GENOME:
;      CHROMOSOME/SEGMENT:  Lambda VIII consensus
US-08-478-039-91

  Query Match             66.0%;  Score 385;  DB 1;  Length 109;
  Best Local Similarity   67.9%;  Pred. No. 1.2e-29;
  Matches   74;  Conservative   12;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:|    |  |||||||||||||||  : ||||||:|
Db          1 SYELTQPPSVSVSPGQTARITCSGDALGQKYVYWYQQKPGQAPVLVIYEDSKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|| ||:|||:| :| ||||||| : ||     ||||||:|||||
Db         61 FSGSNSGTTATLTISGVEAXDEADYYCQAWDSXTXXVVFGGGTKLTVLG 109


RESULT 38
US-08-476-349A-91
; Sequence 91, Application US/08476349A
; Patent No. 5750105
;  GENERAL INFORMATION:
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Raab, Ronald W.
;    TITLE OF INVENTION:  Recombinant Antibodies for Human Therapy
;    NUMBER OF SEQUENCES:  114
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince St.
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22313-1404
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/476,349A
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/379,072
;      FILING DATE:  25-JAN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/912,292
;      FILING DATE:  10-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/856,281
;      FILING DATE:  23-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/735,064
;      FILING DATE:  25-JUL-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin Esq., Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-161
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  91:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  109 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  not relevant
;    MOLECULE TYPE:  peptide
;    ORIGINAL SOURCE:
;      ORGANISM:  Homo sapiens
;    POSITION IN GENOME:
;      CHROMOSOME/SEGMENT:  Lambda VIII consensus
US-08-476-349A-91

  Query Match             66.0%;  Score 385;  DB 1;  Length 109;
  Best Local Similarity   67.9%;  Pred. No. 1.2e-29;
  Matches   74;  Conservative   12;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:|    |  |||||||||||||||  : ||||||:|
Db          1 SYELTQPPSVSVSPGQTARITCSGDALGQKYVYWYQQKPGQAPVLVIYEDSKRPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||:|| ||:|||:| :| ||||||| : ||     ||||||:|||||
Db         61 FSGSNSGTTATLTISGVEAXDEADYYCQAWDSXTXXVVFGGGTKLTVLG 109


RESULT 39
US-08-345-321-8
; Sequence 8, Application US/08345321
; Patent No. 5914109
;  GENERAL INFORMATION:
;    APPLICANT:  ZOLLA-PAZNER, Susan
;    APPLICANT:  GORNY, Miroslav K.
;    TITLE OF INVENTION:  HETEROHYBRIDOMAS PRODUCING HUMAN
;    TITLE OF INVENTION:  MONOCLONAL ANTIBODIES TO HIV-1
;    NUMBER OF SEQUENCES:  22
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Browdy and Neimark
;      STREET:  419 Seventh Street, N.W., Suite 300
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20004
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/345,321
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/872,675
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Browdy, Roger L.
;      REGISTRATION NUMBER:  25,618
;      REFERENCE/DOCKET NUMBER:  ZOLLA-PAZNER1B
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-628-5197
;      TELEFAX:  202-737-3528
;      TELEX:  248633
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  143 amino acids
;      TYPE:  amino acid
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;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-345-321-8

  Query Match             65.4%;  Score 381.5;  DB 2;  Length 143;
  Best Local Similarity   67.0%;  Pred. No. 3.5e-29;
  Matches   73;  Conservative   14;  Mismatches   21;  Indels    1;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:| : |  ||||:||||||:|:|    ||||||:|
Db         20 SYELTQPPSVSVSPGQTARITCSGDALPNQYVYWYQQRPGQAPVVVLYKDTERPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH-WVFGGGTELTVL 110
              ||||||| | :|||:| |||||||||| | |:|| :   |||||:||||
Db         80 FSGSSSGTTVTLTISGVQAEDEADYYCQSADNSGAYPLFFGGGTKLTVL 128


RESULT 40
US-08-259-372A-10
;  Sequence 10, Application US/08259372A
;  Patent No. 5565354
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/259,372A
;      FILING DATE:  14-JUN-1994
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/676,036
;      FILING DATE:  27-MAR-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/538,796
;      FILING DATE:  15-JUN-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/192,754
;      FILING DATE:  11-MAY-1988
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/925,196
;      FILING DATE:  31-OCT-1986
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/904,517
;      FILING DATE:  05-SEP-1986
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-50-7
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein

US-08-259-372A-10

  Query Match             65.0%;  Score 379;  DB 1;  Length 108;
  Best Local Similarity   67.3%;  Pred. No. 4.3e-29;
  Matches   72;  Conservative   15;  Mismatches   20;  Indels    0;  Gaps    0;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |:||| |:|||| ||| |:|| ||:: |   :|:||||||||||:|  | ||||| :||
Db          2 SQLTQPPSVSVAPGQTARITCGGDNIGSKSVNWFQQKPGQAPVLVVYDDNERPSGISERF 61

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||:|||||:|||:  :| |||||||   ||| :| ||||||:||||
Db         62 SGSNSGNTATLTISRVEAGDEADYYCQVWDSSSDHVVFGGGTKLTVL 108


RESULT 41
US-08-468-671-10
; Sequence 10, Application US/08468671
; Patent No. 5648077
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/468,671
;      FILING DATE:  06-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/259,372
;      FILING DATE:  14-JUN-1994
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/676,036
;      FILING DATE:  27-MAR-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/538,796
;      FILING DATE:  15-JUN-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/192,754
;      FILING DATE:  11-MAY-1988
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/925,196
;      FILING DATE:  31-OCT-1986
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/904,517
;      FILING DATE:  05-SEP-1986
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-50-7
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  108 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
```

US-08-468-671-10

Query Match 65.0%; Score 379; DB 1; Length 108;
Best Local Similarity 67.3%; Pred. No. 4.3e-29;
Matches 72; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |:||| |:|||| ||| |:|| ||:: |   :|:||||||||||:|  | ||||| :||
Db          2 SQLTQPPSVSVAPGQTARITCGGDNIGSKSVNWFQQKPGQAPVLVVYDDNERPSGISERF 61

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||:|||||:|||:  :| |||||||   ||| :| ||||||:||||
Db         62 SGSNSGNTATLTISRVEAGDEADYYCQVWDSSSDHVVFGGGTKLTVL 108
```

RESULT 42
US-08-487-550-2
; Sequence 2, Application US/08487550
; Patent No. 6113898
; GENERAL INFORMATION:
; APPLICANT: Anderson, Darrell R.
; TITLE OF INVENTION: "MONKEY MONOCLONAL ANTIBODIES SPECIFIC
; TITLE OF INVENTION: TO HUMAN B7.1 AND/OR B7.2 PRIMATIZED FORMS THEREOF,
; TITLE OF INVENTION: PHARMACEUTIAL COMPOSITIONS CONTAINING, AND USE THEREOF AS
; TITLE OF INVENTION: IMMUNOSUPPRESANTS"
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: 699 Prince Street
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22314
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/487,550
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Teskin, Robin L.
; REGISTRATION NUMBER: 35,030
; REFERENCE/DOCKET NUMBER: 012712-131
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703-836-6620
; TELEFAX: 703-836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 234 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-487-550-2

Query Match 65.0%; Score 379; DB 3; Length 234;
Best Local Similarity 65.4%; Pred. No. 1e-28;
Matches 70; Conservative 15; Mismatches 22; Indels 0; Gaps 0;

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Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||: |: |  |||||| :||:|||| ::|||||:|||
Db         23 ELTQPPSVSVSPGQTARITCGGDNSRNEYVHWYQQKPARAPILVIYDDSDRPSGIPERFS 82

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || |||||:||| | :| |||||||   | : :| |||||| :||||
Db         83 GSKSGNTATLTINGVEAGDEADYYCQVWDRASDHPVFGGGTRVTVLG 129
```

RESULT 43
US-09-526-098-2
; Sequence 2, Application US/09526098
; Patent No. 6492134
; GENERAL INFORMATION:
; APPLICANT: Anderson, Darrell R.
; TITLE OF INVENTION: "MONKEY MONOCLONAL ANTIBODIES SPECIFIC
; TITLE OF INVENTION: TO HUMAN B7.1 AND/OR B7.2 PRIMATIZED FORMS THEREOF,
; TITLE OF INVENTION: PHARMACEUTIAL COMPOSITIONS CONTAINING, AND USE THEREOF AS
; TITLE OF INVENTION: IMMUNOSUPPRESANTS"
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
; STREET: 699 Prince Street
; CITY: Alexandria
; STATE: VA
; COUNTRY: USA
; ZIP: 22314
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/526,098
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/383,916
; FILING DATE:
; APPLICATION NUMBER: US 08/487,550
; FILING DATE: 07-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Teskin, Robin L.
; REGISTRATION NUMBER: 35,030
; REFERENCE/DOCKET NUMBER: 012712-131
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703-836-6620
; TELEFAX: 703-836-2021
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 234 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-526-098-2

Query Match 65.0%; Score 379; DB 4; Length 234;
Best Local Similarity 65.4%; Pred. No. 1e-28;
Matches 70; Conservative 15; Mismatches 22; Indels 0; Gaps 0;

```
Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: ||| |:|| ||: |: |  |||||| :||:|||| ::|||||:|||
Db         23 ELTQPPSVSVSPGQTARITCGGDNSRNEYVHWYQQKPARAPILVIYDDSDRPSGIPERFS 82

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || |||||:||| | :| |||||||   | : :| |||||| :||||
Db         83 GSKSGNTATLTINGVEAGDEADYYCQVWDRASDHPVFGGGTRVTVLG 129
```

RESULT 44
US-08-259-372A-16
; Sequence 16, Application US/08259372A
; Patent No. 5565354
; GENERAL INFORMATION:
; APPLICANT: Ostberg, Lars G.
; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL
; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
; NUMBER OF SEQUENCES: 16
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: CA
; COUNTRY: USA
; ZIP: 94111-3834

```
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/259,372A
;      FILING DATE:  14-JUN-1994
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/676,036
;      FILING DATE:  27-MAR-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/538,796
;      FILING DATE:  15-JUN-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/192,754
;      FILING DATE:  11-MAY-1988
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/925,196
;      FILING DATE:  31-OCT-1986
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/904,517
;      FILING DATE:  05-SEP-1986
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-50-7
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  106 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-259-372A-16

  Query Match             63.6%;  Score 371;  DB 1;  Length 106;
  Best Local Similarity   67.3%;  Pred. No. 2.4e-28;
  Matches   72;  Conservative   14;  Mismatches   19;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |:|||  :|||: |||  :|| || |   :||||||||||:|:|||:  | ||||||:||
Db          2 SQLTQPASVSVSPGQTASITCSGDRLGDEFASWYQQKPGQSPILVIFEDNKRPSGIPERF 61

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||:|||||:|||:| || ||||||| :  ||   |||||||:||||
Db         62 SGSNSGNTATLTISGTQAMDEADYYCLAWASS--LWVFGGGTKLTVL 106


RESULT 45
US-08-468-671-16
; Sequence 16, Application US/08468671
; Patent No. 5648077
;  GENERAL INFORMATION:
;    APPLICANT:  Ostberg, Lars G.
;    TITLE OF INVENTION:  PRODUCTION OF HUMAN MONOCLONAL
;    TITLE OF INVENTION:  ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
;    NUMBER OF SEQUENCES:  16
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, Eighth Floor
;      CITY:  San Francisco
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94111-3834
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/468,671
;      FILING DATE:  06-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/259,372
;      FILING DATE:  14-JUN-1994
;      APPLICATION NUMBER:  US 07/871,426
;      FILING DATE:  21-APR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/676,036
;      FILING DATE:  27-MAR-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/538,796
;      FILING DATE:  15-JUN-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/192,754
;      FILING DATE:  11-MAY-1988
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/925,196
;      FILING DATE:  31-OCT-1986
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 06/904,517
;      FILING DATE:  05-SEP-1986
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-50-7
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 576-0300
;  INFORMATION FOR SEQ ID NO:  16:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  106 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-468-671-16

  Query Match             63.6%;  Score 371;  DB 1;  Length 106;
  Best Local Similarity   67.3%;  Pred. No. 2.4e-28;
  Matches   72;  Conservative   14;  Mismatches   19;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |:|||  :|||: |||  :|| || |   :||||||||||:|:|||:  | ||||||:||
Db          2 SQLTQPASVSVSPGQTASITCSGDRLGDEFASWYQQKPGQSPILVIFEDNKRPSGIPERF 61

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||:|||||:|||:| || ||||||| :  ||   |||||||:||||
Db         62 SGSNSGNTATLTISGTQAMDEADYYCLAWASS--LWVFGGGTKLTVL 106


RESULT 46
US-08-478-039-110
; Sequence 110, Application US/08478039
; Patent No. 5681722
;  GENERAL INFORMATION:
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Raab, Ronald W.
;    TITLE OF INVENTION:  Recombinant Antibodies for Human Therapy
;    NUMBER OF SEQUENCES:  114
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince St.
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22313-1404
;    COMPUTER READABLE FORM:
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;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/478,039
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/379,072
;      FILING DATE:  25-JAN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/912,292
;      FILING DATE:  10-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/856,281
;      FILING DATE:  23-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/735,064
;      FILING DATE:  25-JUL-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin Esq., Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-160
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  110:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  128 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-478-039-110

  Query Match             63.3%;  Score 369;  DB 1;  Length 128;
  Best Local Similarity   64.9%;  Pred. No. 4.7e-28;
  Matches   72;  Conservative   12;  Mismatches   27;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | | ||:|  :|||: |||   || ||::      |||||| ||||||||  : ||||||
Db         18 AASYELSQPRSVSVSPGQTAGFTCGGDNVGRKSVQWYQQKPPQAPVLVIYADSERPSGIP 77

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:|||||:|||:| :| |||||||   ||: :|||||||| |||||
Db         78 ARFSGSNSGNTATLTISGVEAGDEADYYCQVWDSTADHWVFGGGTRLTVLG 128


RESULT 47
US-08-476-349A-110
; Sequence 110, Application US/08476349A
; Patent No. 5750105
;  GENERAL INFORMATION:
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Raab, Ronald W.
;    TITLE OF INVENTION:  Recombinant Antibodies for Human Therapy
;    NUMBER OF SEQUENCES:  114
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince St.
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22313-1404
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/476,349A
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/379,072
;      FILING DATE:  25-JAN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/912,292
;      FILING DATE:  10-JUL-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/856,281
;      FILING DATE:  23-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/735,064
;      FILING DATE:  25-JUL-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin Esq., Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-161
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  110:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  128 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-476-349A-110

  Query Match             63.3%;  Score 369;  DB 1;  Length 128;
  Best Local Similarity   64.9%;  Pred. No. 4.7e-28;
  Matches   72;  Conservative   12;  Mismatches   27;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | | ||:|  :|||: |||   || ||::      |||||| ||||||||  : ||||||
Db         18 AASYELSQPRSVSVSPGQTAGFTCGGDNVGRKSVQWYQQKPPQAPVLVIYADSERPSGIP 77

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:|||||:|||:| :| |||||||   ||: :|||||||| |||||
Db         78 ARFSGSNSGNTATLTISGVEAGDEADYYCQVWDSTADHWVFGGGTRLTVLG 128


RESULT 48
US-08-523-894-4
; Sequence 4, Application US/08523894
; Patent No. 6136310
;  GENERAL INFORMATION:
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Reff, Mitchell E.
;    TITLE OF INVENTION:  Recombinant Anti-CD4 Antibodies for Human
;    TITLE OF INVENTION:  Therapy
;    NUMBER OF SEQUENCES:  59
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince Street
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22314-3187
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/523,894
;      FILING DATE:  06-SEP-1995
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin, Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-165
;    TELECOMMUNICATION INFORMATION:
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```
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  128 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-523-894-4

  Query Match           63.3%;  Score 369;  DB 3;  Length 128;
  Best Local Similarity  64.9%;  Pred. No. 4.7e-28;
  Matches   72;  Conservative   12;  Mismatches   27;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | | ||:|  :|||: |||   || ||::      |||||| ||||||||  : ||||||
Db         18 AASYELSQPRSVSVSPGQTAGFTCGGDNVGRKSVQWYQQKPPQAPVLVIYADSERPSGIP 77

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:|||||:|||:| :| ||||||||   ||: :|||||||| |||||
Db         78 ARFSGSNSGNTATLTISGVEAGDEADYYCQVWDSTADHWVFGGGTRLTVLG 128


RESULT 49
US-08-523-894-6
; Sequence 6, Application US/08523894
; Patent No. 6136310
;  GENERAL INFORMATION:
;    APPLICANT:  Hanna, Nabil
;    APPLICANT:  Newman, Roland A.
;    APPLICANT:  Reff, Mitchell E.
;    TITLE OF INVENTION:  Recombinant Anti-CD4 Antibodies for Human
;    TITLE OF INVENTION:  Therapy
;    NUMBER OF SEQUENCES:  59
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BURNS, DOANE, SWECKER & MATHIS
;      STREET:  699 Prince Street
;      CITY:  Alexandria
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22314-3187
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/523,894
;      FILING DATE:  06-SEP-1995
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Teskin, Robin L.
;      REGISTRATION NUMBER:  35,030
;      REFERENCE/DOCKET NUMBER:  012712-165
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  703-836-6620
;      TELEFAX:  703-836-2021
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 233 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-523-894-6

  Query Match           63.3%;  Score 369;  DB 3;  Length 233;
  Best Local Similarity  64.9%;  Pred. No. 9.2e-28;
  Matches   72;  Conservative   12;  Mismatches   27;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | | ||:|  :|||: |||   || ||::      |||||| ||||||||  : ||||||
Db         18 AASYELSQPRSVSVSPGQTAGFTCGGDNVGRKSVQWYQQKPPQAPVLVIYADSERPSGIP 77

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||:|||||:|||:| :| ||||||||   ||: :|||||||| |||||
Db         78 ARFSGSNSGNTATLTISGVEAGDEADYYCQVWDSTADHWVFGGGTRLTVLG 128


RESULT 50
US-10-039-785-42
; Sequence 42, Application US/10039785
; Patent No. 6538938
; GENERAL INFORMATION:
;  APPLICANT: Salcedo et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind to TRAIL
;  TITLE OF INVENTION:  Receptors
;  FILE REFERENCE: PF550
;  CURRENT APPLICATION NUMBER: US/10/039,785
;  CURRENT FILING DATE:  2002-05-07
;  PRIOR APPLICATION NUMBER: 60/369,860
;  PRIOR FILING DATE: 2002-04-05
;  PRIOR APPLICATION NUMBER: 60/341,237
;  PRIOR FILING DATE: 2001-12-20
;  PRIOR APPLICATION NUMBER: 60/331,310
;  PRIOR FILING DATE: 2001-11-14
;  PRIOR APPLICATION NUMBER: 60/331,044
;  PRIOR FILING DATE: 2001-11-07
;  PRIOR APPLICATION NUMBER: 60/327,364
;  PRIOR FILING DATE: 2001-10-09
;  PRIOR APPLICATION NUMBER: 60/323,807
;  PRIOR FILING DATE: 2001-09-21
;  PRIOR APPLICATION NUMBER: 60/309,176
;  PRIOR FILING DATE: 2001-08-02
;  PRIOR APPLICATION NUMBER: 60/294,981
;  PRIOR FILING DATE: 2001-06-04
;  PRIOR APPLICATION NUMBER: 60/293,473
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 66
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 42
;   LENGTH: 245
;   TYPE: PRT
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: T1014A04 scFv
US-10-039-785-42

  Query Match           63.0%;  Score 367;  DB 4;  Length 245;
  Best Local Similarity  65.8%;  Pred. No. 1.5e-27;
  Matches   73;  Conservative   13;  Mismatches   21;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |: | : ||:| ::| |     :  | | ||||| ||:|| |:||| | ||||:|
Db        136 SVLTQPPSASGSPGQSVTISCTGTTSDVGGYNYVSWYQQHPGKAPKLMIYGVNQRPSGVP 195

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||| |||||||::| |||||||||||    | |:|||||:|||||
Db        196 DRFSGSKSGNTASLTVSGLQAEDEADYYCSSYAGS-NNWVFGGGTKLTVLG 245


Search completed: November 26, 2003, 13:42:24
Job time : 14.7564 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:36:04 ; Search time 32.0641 Seconds
(without alignments)
989.907 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 830525 seqs, 258052604 residues

T[redacted] number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SPTREMBL_23:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archeap:*

[redacted] Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	439.5	68.6	116	4	Q9UL89	Q9ul89 homo sapien
2	409.5	63.9	159	4	Q96QS0	Q96qs0 homo sapien
3	391.5	61.1	124	4	Q9UL92	Q9ul92 homo sapien
4	385.5	60.1	496	4	Q96DK0	Q96dk0 homo sapien
5	385	60.1	119	4	Q9UL94	Q9ul94 homo sapien
6	383	59.8	614	4	Q96GA6	Q96ga6 homo sapien
7	378	59.0	125	4	Q9UL95	Q9ul95 homo sapien
8	374	58.3	119	5	Q9GYZ2	Q9gyz2 schistosoma
9	365	56.9	497	4	Q8WY24	Q8wy24 homo sapien
10	364	56.8	473	11	Q9D8L4	Q9d814 mus musculu
11	360.5	56.2	500	4	Q9BRV0	Q9brv0 homo sapien
12	357.5	55.8	145	11	Q924Q9	Q924q9 mus musculu
13	356	55.5	150	4	Q9Y298	Q9y298 homo sapien
14	355.5	55.5	463	11	Q99LC4	Q991c4 mus musculu
15	355.5	55.5	613	11	Q8VCX7	Q8vcx7 mus musculu
16	353.5	55.1	145	11	Q924Q6	Q924q6 mus musculu
17	352	54.9	146	11	Q924Q3	Q924q3 mus musculu
18	346.5	54.1	482	11	Q8K172	Q8k172 mus musculu
19	345.5	53.9	143	11	Q924Q0	Q924q0 mus musculu
20	344.5	53.7	118	11	Q9Z1C4	Q9z1c4 mus musculu
21	344.5	53.7	145	11	Q924P7	Q924p7 mus musculu
22	344	53.7	117	11	Q9QXE9	Q9qxe9 mus musculu
23	343.5	53.6	143	11	Q924R0	Q924r0 mus musculu
24	343.5	53.6	145	11	Q924R4	Q924r4 mus musculu
25	343	53.5	123	11	Q8VIJ1	Q8vij1 mus musculu
26	342	53.4	142	11	Q924Q1	Q924q1 mus musculu
27	341.5	53.3	143	11	Q924Q5	Q924q5 mus musculu
28	340.5	53.1	145	11	Q924R1	Q924r1 mus musculu
29	340	53.0	146	11	Q924R8	Q924r8 mus musculu
30	338.5	52.8	143	11	Q924R7	Q924r7 mus musculu
31	338	52.7	140	11	Q924R2	Q924r2 mus musculu
32	338	52.7	168	11	Q8VDC9	Q8vdc9 mus musculu
33	337.5	52.7	473	11	Q99L25	Q99125 mus musculu
34	337	52.6	480	11	Q8K0Z4	Q8k0z4 mus musculu
35	336	52.4	140	11	Q924P8	Q924p8 mus musculu
36	336	52.4	146	11	Q924Q8	Q924q8 mus musculu
37	335.5	52.3	139	11	Q924R5	Q924r5 mus musculu
38	335.5	52.3	143	11	Q91V67	Q91v67 mus musculu
39	335	52.3	481	11	Q91WT1	Q91wt1 mus musculu
40	334.5	52.2	141	11	Q924Q4	Q924q4 mus musculu
41	334.5	52.2	145	11	Q924R3	Q924r3 mus musculu
42	334.5	52.2	241	11	Q921A6	Q921a6 mus musculu
43	334	52.1	117	11	Q9QXF0	Q9qxf0 mus musculu
44	334	52.1	120	11	Q920E8	Q920e8 mus musculu
45	333.5	52.0	143	11	Q91VA2	Q91va2 mus musculu

ALIGNMENTS

RESULT 1
Q9UL89
ID Q9UL89 PRELIMINARY; PRT; 116 AA.
AC Q9UL89;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Myosin-reactive immunoglobulin heavy chain variable region
DE (Fragment).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98277139; PubMed=9614934;
RA Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA Young D.C.;
RT "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT fetus.";
RL Clin. Immunol. Immunopathol. 87:184-192(1998).
DR EMBL; AF035025; AAD56261.1; -.
DR HSSP; P01810; 2FBJ.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 116 116
SQ SEQUENCE 116 AA; 12605 MW; C8F9131DE13EA898 CRC64;

Query Match 68.6%; Score 439.5; DB 4; Length 116;
Best Local Similarity 74.6%; Pred. No. 5.4e-39;
Matches 88; Conservative 9; Mismatches 18; Indels 3; Gaps 1;

Qy 6 QSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQ 65

```
Db          2 QSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGRIIPILGIANYAQKFQ 61

Qy         66 GRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTVSS 123
              ||| ||||:|| || |||||||||||||||||| |      |:     |||||:|||||
Db         62 GRVTITADKSTSTAYMELSSLRSEDTAVYYCASSN---WGPYWYFDLWGRGTLVTVSS 116


RESULT 2
Q96QS0
ID   Q96QS0      PRELIMINARY;      PRT;   159 AA.
AC   Q96QS0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Putative matrix cell adhesion molecule-3.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Tilson M.D.;
RT   "Homo sapiens putative microfibrillar protein with Ig-like domain 3
RT   mRNA (Matrix Cell Adhesion Molecule-3, Mat-CAM 3).";
RL   Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY039025; AAK82649.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
SQ   SEQUENCE   159 AA;  17497 MW;  5D29537E881FAF02 CRC64;

  Query Match             63.9%;  Score 409.5;  DB 4;  Length 159;
  Best Local Similarity   62.3%;  Pred. No. 1.2e-35;
  Matches   81;  Conservative   17;  Mismatches   25;  Indels    7;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| ||:|  :|||||||||| |||| | |  |:|:|
Db         20 QVQLVQSGAEVKKPGASVKVSCKASGYTFSNYYMNWVRQAPGQGPEWMGVINPSGGSARY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLL-------FPHHALSPW 113
              || ||||: :| | || |  |:||||||:|||||:|||  ::         | :: :  |
Db         80 SQKFQGRLTMTRDTSTSTVYMDLSSLRSDDTAVYFCAREMEITFGGAVSKGFYYYGMDVW 139

Qy        114 GRGTMVTVSS 123
              |:|| |||||
Db        140 GQGTTVTVSS 149


RESULT 3
Q9UL92
ID   Q9UL92      PRELIMINARY;      PRT;   124 AA.
AC   Q9UL92;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin heavy chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035022; AAD56258.1; -.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     124    124
SQ   SEQUENCE   124 AA;  13580 MW;  1BAAACBD96ACD2A2 CRC64;

  Query Match             61.1%;  Score 391.5;  DB 4;  Length 124;
  Best Local Similarity   65.1%;  Pred. No. 7.4e-34;
  Matches   82;  Conservative   14;  Mismatches   25;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :|||||||||:||:||||||| ||::  ::|||||||||||||| | |  |:  |
Db          1 EVQLVESGAEVKKPGASVKVSCKASGYTFSSYYMHWVRQAPGQGLEWMGIINPSGGSTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP---WGRGT 117
              :| ||||| :| | || |  |||||||||||||||||    | :    | |    ||:||
Db         61 AQKFQGRVTMTRDTSTSTVYMELSSLRSEDTAVYYCARG--LYVVVPAAFSRFDYWGQGT 118

Qy        118 MVTVSS 123
              :|||||
Db        119 LVTVSS 124


RESULT 4
Q96DK0
ID   Q96DK0      PRELIMINARY;      PRT;   496 AA.
AC   Q96DK0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein FLJ25298.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Gastric mucosa;
RA   Ishibashi T., Kanehori K., Yosida M., Watanabe S., Ishida S., Ono Y.,
RA   Hotuta T., Hiraoka S., Murakawa K., Takiguchi S., Kusano J.,
RA   Watanabe M., Fujimori K., Tanai H., Ishida M., Yamashita H., Chiba Y.,
RA   Suzuki Y., Hata H., Nakagawa K., Mizuno S., Morinaga M., Kawamura M.,
RA   Sugiyama T., Irie R., Otsuki T., Sato H., Nishikawa T., Sugiyama A.,
RA   Kawakami B., Nagai K., Isogai T., Sugano S.;
RT   "NEDO human cDNA sequencing project.";
RL   Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AK058027; BAB71633.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   496 AA;  53532 MW;  C72EE1E247C86FED CRC64;

  Query Match             60.1%;  Score 385.5;  DB 4;  Length 496;
  Best Local Similarity   61.9%;  Pred. No. 1.8e-32;
  Matches   78;  Conservative   13;  Mismatches   30;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              || | |||||:| |||||:||||||   | : |  ||||||||||:||||||| ||   |
Db         20 QVHLVQSGAELKMPGSSVKVSCKASANMFRSYAFTWVRQAPGQGLQWMGGIIPNFGAPNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLF---PHHALSPWGRGT 117
              :|||| || |:||:|| |  |||:||  |||| ||| |   |  :    :: |  ||:||
Db         80 AQNFQDRVTISADDSTTTVYMELTSLTFEDTAFYYCGRG--LTYYGSGSYYYLQHWGQGT 137
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Qy        118 MVTVSS 123
              :|||||
Db        138 LVTVSS 143


RESULT 5
Q9UL94
ID   Q9UL94      PRELIMINARY;      PRT;   119 AA.
AC   Q9UL94;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin heavy chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035020; AAD56256.1; -.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  13205 MW;  13E64F5345F4A16E CRC64;

  Query Match             60.1%;  Score 385;  DB 4;  Length 119;
  Best Local Similarity   63.4%;  Pred. No. 3.4e-33;
  Matches   78;  Conservative   13;  Mismatches   28;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :|||||||||:||:||||||| ||    ::|||||||||||||| | |   | |
Db          1 EVQLVESGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSWTTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |||:| :| | |  || |||| |||:|||||||||     |:      |||:||:||
Db         61 AQKFQGKVTMTKDTSISTAYMELSRLRSDDTAVYYCARGGGRGLW----FDPWGQGTLVT 116

Qy        121 VSS 123
              |||
Db        117 VSS 119


RESULT 6
Q96GA6
ID   Q96GA6      PRELIMINARY;      PRT;   614 AA.
AC   Q96GA6;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=B-cell;
RA   Strausberg R.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC009851; AAH09851.1; -.
DR   InterPro; IPR000005; HTHAraC.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 5.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00041; HTH_ARAC_FAMILY_1; 1.
DR   PROSITE; PS50835; IG_LIKE; 5.
DR   PROSITE; PS00290; IG_MHC; 3.
KW   Hypothetical protein.
SQ   SEQUENCE   614 AA;  67921 MW;  55EF536E77AA9BBB CRC64;

  Query Match             59.8%;  Score 383;  DB 4;  Length 614;
  Best Local Similarity   64.6%;  Pred. No. 4.3e-32;
  Matches   82;  Conservative    7;  Mismatches   28;  Indels   10;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |:|| |||||||| ||||:||||||| ||     ::|||||||| ||||| | |   |
Db         20 QMQLVQSGAEVKKTGSSVKVSCKASGYTFTYRYLHWVRQAPGQALEWMGWITPFNGNTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR----SRDLLLFPHHALSPWGRG 116
              :| || || || | |  || |||||||||||:|||||    | |       |   ||:|
Db         80 AQKFQDRVTITRDRSMNTAYMELSSLRSEDTAMYYCARGYSSSWD------DAFDIWGQG 133

Qy        117 TMVTVSS 123
              |||||||
Db        134 TMVTVSS 140


RESULT 7
Q9UL95
ID   Q9UL95      PRELIMINARY;      PRT;   125 AA.
AC   Q9UL95;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin heavy chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035019; AAD56255.1; -.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     125    125
SQ   SEQUENCE   125 AA;  13516 MW;  0D3CD5C232488EAC CRC64;

  Query Match             59.0%;  Score 378;  DB 4;  Length 125;
  Best Local Similarity   62.4%;  Pred. No. 2e-32;
  Matches   78;  Conservative   13;  Mismatches   32;  Indels    2;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||`:|||||||||:||:||||||| ||     ::|||||||||||||| | |   |
Db          1 EVQLVESGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSR--DLLLFPHHALSPWGRGTM 118
              :|  |||| :| | :  || |||| |||:||||||||||:    :      |   ||:|||
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Db         61 AQKVQGRVTMTRDTTISTAYMELSRLRSDDTAVYYCARSQGGGRIAAAGDAFDIWGQGTM 120

Qy        119 VTVSS 123
              |||||
Db        121 VTVSS 125


RESULT 8
Q9GYZ2
ID   Q9GYZ2      PRELIMINARY;      PRT;   119 AA.
AC   Q9GYZ2;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Monoclonal anti-idiotypic antibody NP30 heavy chain variable region
DE   (Fragment).
OS   Schistosoma japonicum (Blood fluke).
OC   Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea; Strigeidida;
OC   Schistosomatoidea; Schistosomatidae; Schistosoma.
OX   NCBI_TaxID=6182;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Song X.T., Feng Z.Q., Guan X.H.;
RT   "Amplification, cloning and sequence analysis of the heavy chain
RT   variable region gene of monoclonal anti-idiotypic antibody NP30 of
RT   Schistosoma japonicum.";
RL   Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF282622; AAG01452.1; -.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  13567 MW;  BA893873FD5FA6AB CRC64;

  Query Match             58.3%;  Score 374;  DB 5;  Length 119;
  Best Local Similarity   61.8%;  Pred. No. 5.1e-32;
  Matches   76;  Conservative   13;  Mismatches   30;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| :|||||:|||:|||||||||| ||    :|||||||| ||||:| | |   |    |
Db          1 QVQLVESGAEVRKPGASVRVSCKASGYTFTGYYMNWVRQAPGHGLEWIGYINPSRGYTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |: || :| |:|  || |:| |||| |:|||||||  |     |: |  ||:|| ||
Db         61 NQKFKDRVTMTTDKSFSTAYMDLRSLRSADSAVYYCARYYD----DHYCLDYWGQGTTVT 116

Qy        121 VSS 123
              |||
Db        117 VSS 119


RESULT 9
Q8WY24
ID   Q8WY24      PRELIMINARY;      PRT;   497 AA.
AC   Q8WY24;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   SNC66 protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Zheng S., Shao X., Cao J., Geng L., Fang Y., Dong Q.;
RT   "Identification and characterization of SNC66, a Ig-like gene which is
RT   down-regulated in colorectal cancer.";
RL   Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF283666; AAL36987.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
SQ   SEQUENCE   497 AA;  53665 MW;  F24D08DFA5A663E5 CRC64;

  Query Match             56.9%;  Score 365;  DB 4;  Length 497;
  Best Local Similarity   59.2%;  Pred. No. 2.7e-30;
  Matches   74;  Conservative   16;  Mismatches   33;  Indels    2;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              | ||:|||||| |||:||:||||||| ||    |||||||||||||||| : |  |  ::
Db         20 QEQLEQSGAEVTKPGASVKVSCKASGYTFIAYDINWVRQAPGQGLEWMGWMNPQTGNTEF 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS--RDLLLFPHHALSPWGRGTM 118
              :| ||||:  : | |  || | |||| :||:|:|:|||   |    | ::   ||| ||:
Db         80 AQKFQGRLTFSRDTSINTAYMVLSSLSTEDSAIYFCARGNLRGGRGFGYNWFDPWGHGTL 139

Qy        119 VTVSS 123
              |||||
Db        140 VTVSS 144


RESULT 10
Q9D8L4
ID   Q9D8L4      PRELIMINARY;      PRT;   473 AA.
AC   Q9D8L4;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   1810060O09Rik protein.
GN   IGH-1 OR 1810060O09RIK.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Pancreas;
RX   MEDLINE=21085660; PubMed=11217851;
RA   Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA   Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA   Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA   Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA   Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA   Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA   Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA   Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA   Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA   Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA   Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA   Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA   Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA   Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA   Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA   Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA   Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA   Hayashizaki Y.;
RT   "Functional annotation of a full-length mouse cDNA collection.";
RL   Nature 409:685-690(2001).
DR   EMBL; AK007918; BAB25349.1; -.
DR   HSSP; P01842; 7FAB.
DR   MGD; MGI:96443; Igh-1.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
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DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
SQ   SEQUENCE   473 AA;  51699 MW;  9DED57A514475FBB CRC64;

  Query Match             56.8%;  Score 364;  DB 11;  Length 473;
  Best Local Similarity   56.9%;  Pred. No. 3.3e-30;
  Matches   70;  Conservative   25;  Mismatches   24;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||:|||||: |||:||::|||||| || :  ||||:| |||||||:| | |   |:  |
Db         20 QVQLKQSGAELVKPGASVKISCKASGYTFTDYYINWVKQRPGQGLEWIGKIGPGSGSTYY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:|:  :|||:|: || |:|||| |||:|||:||||     : :   : ||:||:||
Db         80 NEKFKGKATLTADKSSSTAYMQLSSLTSEDSAVYFCARSG----YDYDWFAYWGQGTLVT 135

Qy        121 VSS 123
              ||:
Db        136 VSA 138


RESULT 11
Q9BRV0
ID   Q9BRV0      PRELIMINARY;      PRT;   500 AA.
AC   Q9BRV0;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Prostate;
RA   Strausberg R.;
RL   Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC005951; AAH05951.1; -.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
K    Hypothetical protein.
S    SEQUENCE   500 AA;  54154 MW;  0A9BF43F2A3CC6D9 CRC64;

  Query Match             56.2%;  Score 360.5;  DB 4;  Length 500;
  Best Local Similarity   56.5%;  Pred. No. 8.2e-30;
  Matches   74;  Conservative   14;  Mismatches   32;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              || | ||||||  ||:||||||| ||  |:  :| |||||||||||||| | |     ::
Db         20 QVHLVQSGAEVMSPGASVRVSCKTSGYAFHTYSIIWVRQAPGQGLEWMGWISPSSDNTRF 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR--------SRDLLLFPHHALSP 112
              :: ||||| :| | || |  ||| ||||:||||||||          |   : :: :
Db         80 AKKFQGRVTLTTDTSTSTVYMELRSLRSDDTAVYYCARRYCSYSSCQND---YYYYYMDV 136

Qy        113 WGRGTMVTVSS 123
              ||:|| |||||
Db        137 WGKGTTVTVSS 147


RESULT 12
Q924Q9
ID   Q924Q9      PRELIMINARY;      PRT;   145 AA.
AC   Q924Q9;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067791; BAB63276.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  16001 MW;  0F409EB09FA333D2 CRC64;

  Query Match             55.8%;  Score 357.5;  DB 11;  Length 145;
  Best Local Similarity   56.1%;  Pred. No. 3.7e-30;
  Matches   69;  Conservative   24;  Mismatches   27;  Indels    3;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |   |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:||||||||    |:  ::|:  ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARS---LITTYYAMDYWGQGTSVT 117

Qy        121 VSS 123
              |||
Db        118 VSS 120


RESULT 13
Q9Y298
ID   Q9Y298      PRELIMINARY;      PRT;   150 AA.
AC   Q9Y298;
DT   01-NOV-1999 (TrEMBLrel. 12, Created)
DT   01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   IgG VH protein precursor (Fragment).
GN   IGG VH.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98322155; PubMed=9657749;
RA   Jacquemin M.G., Vander Elst L.P.L.;
RT   "Mechanism and kinetics of factor VIII inactivation: study with an
RT   IgG4 monclonal antibody derived from a hemophilia A patient with
RT   inhibitor.";
RL   Blood 92:496-506(1998).
DR   EMBL; AJ224083; CAA11829.1; -.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Signal.
FT   SIGNAL        1     19       POTENTIAL.
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FT   NON_TER     150    150
SQ   SEQUENCE   150 AA;  16031 MW;  563D164AB22802D5 CRC64;

  Query Match             55.5%;  Score 356;  DB 4;  Length 150;
  Best Local Similarity   60.2%;  Pred. No. 5.6e-30;
  Matches   74;  Conservative   13;  Mismatches   30;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||:||:|||| || |     ::|| ||||:||||:|   |  | : |
Db         20 QVQLVQSGAEVKKPGASVKVSCKVSGYTLTELPVHWVGQAPGKGLEWVGSFDPESGESIY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: ||| | :||| ||  | ||||||||:||||||||      :    |   ||:|||||
Db         80 AREFQGSVTMTADTSTDIAYMELSSLRSDDTAVYYCA------VPDPDAFDIWGQGTMVT 133

Qy        121 VSS 123
              |||
Db        134 VSS 136


RESULT 14
Q99LC4
ID   Q99LC4      PRELIMINARY;      PRT;   463 AA.
AC   Q99LC4;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Similar to RIKEN cDNA 1810060O09 gene.
GN   IGH-4.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Strausberg R.;
RL   Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC003435; AAH03435.1; -.
DR   HSSP; P01842; 7FAB.
DR   MGD; MGI:96446; Igh-4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
SQ   SEQUENCE   463 AA;  51007 MW;  EAA674C6BBC30783 CRC64;

  Query Match             55.5%;  Score 355.5;  DB 11;  Length 463;
  Best Local Similarity   55.3%;  Pred. No. 2.5e-29;
  Matches   68;  Conservative   22;  Mismatches   30;  Indels    3;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||: :||:|||:|||||| ||    ::||:|  ||||||:| | |   |    |
Db         20 QVQLQQSGAELARPGASVRLSCKASGYTFTGYGVSWVKQRTGQGLEWVGEIYPGSGNTYY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |: |:|:  :| |:|: || | |||| |||:|||:||||     : :   : ||:||:||
Db         80 SEKFKGKATLTTDKSSSTAYMHLSSLTSEDSAVYFCARSS---YYSYDLFAYWGQGTLVT 136

Qy        121 VSS 123
              ||:
Db        137 VSA 139


RESULT 15
Q8VCX7
ID   Q8VCX7      PRELIMINARY;      PRT;   613 AA.
AC   Q8VCX7;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical 67.9 kDa protein.
GN   IGH-6.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Salivary gland;
RA   Strausberg R.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC018315; AAH18315.1; -.
DR   MGD; MGI:96448; Igh-6.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 5.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 5.
DR   PROSITE; PS00290; IG_MHC; 3.
KW   Hypothetical protein.
SQ   SEQUENCE   613 AA;  67855 MW;  41A9384DD4C22862 CRC64;

  Query Match             55.5%;  Score 355.5;  DB 11;  Length 613;
  Best Local Similarity   56.9%;  Pred. No. 3.6e-29;
  Matches   70;  Conservative   18;  Mismatches   30;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||: |||:||::||||:| ||::  | ||:| || ||||:| |:|  |:  |
Db         20 QVQLQQSGAELMKPGASVKISCKATGYTFSSYWIEWVKQRPGHGLEWIGEILPGSGSTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:|:   ||| |: || |:|||| |||:|||||||       |       || || ||
Db         80 NEKFKGKATFTADTSSNTAYMQLSSLTSEDSAVYYCARRLGRWYF-----DVWGAGTTVT 134

Qy        121 VSS 123
              |||
Db        135 VSS 137


RESULT 16
Q924Q6
ID   Q924Q6      PRELIMINARY;      PRT;   145 AA.
AC   Q924Q6;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067794; BAB63279.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  16011 MW;  9BC0846D40DF97EA CRC64;

  Query Match             55.1%;  Score 353.5;  DB 11;  Length 145;
  Best Local Similarity   56.1%;  Pred. No. 9.8e-30;
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  Matches   69;  Conservative   23;  Mismatches   28;  Indels    3;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:||||||||    |  ::|:  ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARS---TLSHYYAMDYWGQGTSVT 117

Qy        121 VSS 123
              |||
Db        118 VSS 120


RESULT 17
Q924Q3
ID   Q924Q3      PRELIMINARY;      PRT;   146 AA.
AC   Q924Q3;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067797; BAB63282.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     146    146
SQ   SEQUENCE   146 AA;  16136 MW;  CEA8DD6E1955807F CRC64;

  Query Match             54.9%;  Score 352;  DB 11;  Length 146;
  Best Local Similarity   56.1%;  Pred. No. 1.4e-29;
  Matches   69;  Conservative   23;  Mismatches   29;  Indels    2;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:||||||||   |  :  :|:  ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARS--LYDYGDYAMDYWGQGTSVT 118

Qy        121 VSS 123
              |||
Db        119 VSS 121


RESULT 18
Q8K172
ID   Q8K172      PRELIMINARY;      PRT;   482 AA.
AC   Q8K172;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Similar to expressed sequence AI893585.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Breast tumor;
RA   Strausberg R.;
RL   Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC028249; AAH28249.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00407; IGc1; 3.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 2.
SQ   SEQUENCE   482 AA;  52121 MW;  A06FF083E771D084 CRC64;

  Query Match             54.1%;  Score 346.5;  DB 11;  Length 482;
  Best Local Similarity   54.5%;  Pred. No. 2.4e-28;
  Matches   67;  Conservative   22;  Mismatches   29;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db         20 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:||||||||  |  |     : |:  ||:|| ||
Db         80 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCTREGD-----YDAMDYWGQGTSVT 134

Qy        121 VSS 123
              |||
Db        135 VSS 137


RESULT 19
Q924Q0
ID   Q924Q0      PRELIMINARY;      PRT;   143 AA.
AC   Q924Q0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   V165-D-J-C mu protein (Fragment).
GN   V165-D-J-C MU.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB069915; BAB63931.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     143    143
SQ   SEQUENCE   143 AA;  15704 MW;  C99D2433F2BAD8A0 CRC64;

  Query Match             53.9%;  Score 345.5;  DB 11;  Length 143;
  Best Local Similarity   54.5%;  Pred. No. 6.8e-29;
  Matches   67;  Conservative   21;  Mismatches   30;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
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              ||||||  |||: |||:||::||||||  ||  :   |  ||:|  |||||||:|  |  |   |:   |
Db          1 QVQLQQPGAELVKPGASVKMSCKASGYTFTSYWITWVKQRPGQGLEWIGDIYPGSGSTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ::  |: :  :|  |: : ||  |:|||| |||:||||||   : | | :     ||:|| :|
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAPDSNHLYFDY-----WGQGTTLT 115

Qy        121 VSS 123
               |||
Db        116 VSS 118


RESULT 20
Q9Z1C4
ID   Q9Z1C4      PRELIMINARY;      PRT;   118 AA.
AC   Q9Z1C4;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-porcine VCAM mAb 3F4 heavy chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Balb/c;
RA   Mueller J.P., Giannoni M.A., Hartman S.L., Elliott E.A., Squinto S.P.,
RA   Matis L.M., Evans M.J.;
RT   "Humanized porcine VCAM-specific monoclonal antibodies with chimeric
RT   IgG2/G4 constant regions block human leukocyte binding to porcine
RT   endothelial cells.";
RL   Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; U78801; AAD00293.1; -.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     118    118
SQ   SEQUENCE   118 AA;  13036 MW;  90EEC559D31EC4FC CRC64;

  Query Match             53.7%;  Score 344.5;  DB 11;  Length 118;
  Best Local Similarity   55.3%;  Pred. No. 6.9e-29;
  Matches   68;  Conservative   21;  Mismatches   29;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||:||||||: :| :||::||||||  ||:  : ||:| |||||||:| | |  |   |
Db          1 QVQVQQSGAELARPWASVKLSCKASGYNFNSYWMQWVKQRPGQGLEWIGAIYPGDGDTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :|||:|: || |:|||| |||:|||||||      | :     ||:|| :|
Db         61 TQKFRGKATLTADKSSSTAYMQLSSLASEDSAVYYCARRTVGGYFDY-----WGQGTTLT 115

Qy        121 VSS 123
               |||
Db        116 VSS 118


RESULT 21
Q924P7
ID   Q924P7      PRELIMINARY;      PRT;   145 AA.
AC   Q924P7;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB069918; BAB63934.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  15988 MW;  FB73958704796C9A CRC64;

  Query Match             53.7%;  Score 344.5;  DB 11;  Length 145;
  Best Local Similarity   56.1%;  Pred. No. 8.9e-29;
  Matches   69;  Conservative   23;  Mismatches   28;  Indels    3;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||  |||: :|||||::||||||  ||  :  ::||:|  ||:||||:|  |  |   |  ||
Db          1 QVQLQQPGAELVRPGSSVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : ||  |:|||| |||:||||||| :|    |  :|:  ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR-KDGSSF--YAMDYWGQGTSVT 117

Qy        121 VSS 123
               |||
Db        118 VSS 120


RESULT 22
Q9QXE9
ID   Q9QXE9      PRELIMINARY;      PRT;   117 AA.
AC   Q9QXE9;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Immunoglobulin heavy chain V-D-J region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Clemens A., Rademaekers A., Specht C., Koelsch E.;
RL   Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ225174; CAB65237.1; -.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  13000 MW;  CDDE2AF84D499734 CRC64;

  Query Match             53.7%;  Score 344;  DB 11;  Length 117;
  Best Local Similarity   53.7%;  Pred. No. 7.7e-29;
  Matches   66;  Conservative   24;  Mismatches   27;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||||  |: |||:||::||||||  ||  :  : ||:|: |: |||:| | |  |   |
Db          1 EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY 60
```

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Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               :| |:|:  :| |:|: || |:|:|| |||:||||||| |      ::|:  ||:|| ||
Db          61 NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDR------YYAMDYWGQGTSVT 114

Qy         121 VSS 123
               |||
Db         115 VSS 117


RESULT 23
Q924R0
ID   Q924R0      PRELIMINARY;      PRT;   143 AA.
AC   Q924R0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067790; BAB63275.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     143    143
SQ   SEQUENCE   143 AA;  15868 MW;  139B2E966B81E07F CRC64;

  Query Match             53.6%;  Score 343.5;  DB 11;  Length 143;
  Best Local Similarity   54.5%;  Pred. No. 1.1e-28;
  Matches   67;  Conservative   23;  Mismatches   28;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               :: |: :  :| |: : || |:|||| |||:||||||  :      :|:  ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARWDE-----DYAMDYWGQGTSVT 115

Qy        121 VSS 123
               |||
Db        116 VSS 118


RESULT 24
Q924R4
ID   Q924R4      PRELIMINARY;      PRT;   145 AA.
AC   Q924R4;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067785; BAB63270.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  16081 MW;  ECDB1A135E05B8AA CRC64;

  Query Match             53.6%;  Score 343.5;  DB 11;  Length 145;
  Best Local Similarity   55.6%;  Pred. No. 1.1e-28;
  Matches   69;  Conservative   22;  Mismatches   28;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS-RDLLLFPHHALSPWGRGTMV 119
               :: |: :  :| |: : || |:|||| |||:|||||||  |       :|:  ||:|| |
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARSDYDY----DYAMDYWGQGTSV 116

Qy        120 TVSS 123
               ||||
Db        117 TVSS 120


RESULT 25
Q8VIJ1
ID   Q8VIJ1      PRELIMINARY;      PRT;   123 AA.
AC   Q8VIJ1;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-DNA heavy chain (Fragment).
GN   J558.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C3H/HeJ-lpr/lpr;
RX   MEDLINE=96409289; PubMed=8814271;
RA   Wloch M.K., Alexander A.L., Pippen A.M., Pisetsky D.S., Gilkeson G.S.;
RT   "Differences in V kappa gene utilization and VH CDR3 sequence among
RT   anti-DNA from C3H-lpr mice and lupus mice with nephritis.";
RL   Eur. J. Immunol. 26:2225-2233(1996).
DR   EMBL; U59154; AAB02916.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     123    123
SQ   SEQUENCE   123 AA;  13806 MW;  CC0037A806E9911E CRC64;

  Query Match             53.5%;  Score 343;  DB 11;  Length 123;
  Best Local Similarity   50.4%;  Pred. No. 1e-28;
  Matches   62;  Conservative   27;  Mismatches   34;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ::|||||| |: |||:||::|||||| :|    :|||:|: |: |||:| | | :|  :|
Db          1 EIQLQQSGTELVKPGASVKISCKASGYSFTGYNMNWVKQSHGKSLEWVGDINPYYGGTRY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
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                || |: :  :| |:|: || |:|:|| |||:|||||||      :     : ||:||:||
Db         61 SQKFKDKATLTVDKSSRTAYMQLNSLTSEDSAVYYCARDYTYYTYDEGCFAYWGQGTLVT 120

Qy        121 VSS 123
              ||:
Db        121 VSA 123
```

RESULT 26
Q924Q1
ID Q924Q1 PRELIMINARY; PRT; 142 AA.
AC Q924Q1;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE V23-D-J-C mu protein (Fragment).
GN V23-D-J-C MU.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RT "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AB069913; BAB63929.1; -.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 142 142
SQ SEQUENCE 142 AA; 15622 MW; 24A265CE4EA4318B CRC64;

  Query Match 53.4%; Score 342; DB 11; Length 142;
  Best Local Similarity 54.5%; Pred. No. 1.6e-28;
  Matches 67; Conservative 20; Mismatches 30; Indels 6; Gaps 1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| | |: |||:||::|||||| || :  ::||:| |||||||:| | |  |   |
Db          1 QVQLQQPGTELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGQGLEWIGNINPSNGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |:|:.|| |:|||| |||:||||||          |:  ||:|| ||
Db         61 NEKFKSKATLTVDKSSSTAYMQLSSLTSEDSAVYYCARR------GWEAMDYWGQGTSVT 114

Qy        121 VSS 123
              |||
Db        115 VSS 117
```

RESULT 27
Q924Q5
ID Q924Q5 PRELIMINARY; PRT; 143 AA.
AC Q924Q5;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE VH186.2-D-J-C mu protein (Fragment).
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RT "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AB067795; BAB63280.1; -.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 143 143
SQ SEQUENCE 143 AA; 15908 MW; 55A2372870F0D568 CRC64;

  Query Match 53.3%; Score 341.5; DB 11; Length 143;
  Best Local Similarity 55.3%; Pred. No. 1.8e-28;
  Matches 68; Conservative 19; Mismatches 31; Indels 5; Gaps 1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||  |   |          || || ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARFYDYEYF-----DVWGTGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118
```

RESULT 28
Q924R1
ID Q924R1 PRELIMINARY; PRT; 145 AA.
AC Q924R1;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE VH186.2-D-J-C mu protein (Fragment).
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6;
RA Kozono Y., Kozono H., Azuma T.;
RT "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AB067789; BAB63274.1; -.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 145 145
SQ SEQUENCE 145 AA; 15979 MW; 0162D0A26C746C04 CRC64;

  Query Match 53.1%; Score 340.5; DB 11; Length 145;
  Best Local Similarity 56.1%; Pred. No. 2.4e-28;
  Matches 69; Conservative 22; Mismatches 29; Indels 3; Gaps 2;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||  |   |  :|:  ||:|| ||
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```
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR-YDGSSF--YAMDYWGQGTSVT 117

Qy        121 VSS 123
              |||
Db        118 VSS 120


RESULT 29
Q924R8
ID   Q924R8      PRELIMINARY;      PRT;   146 AA.
AC   Q924R8;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067781; BAB63266.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1       1
FT   NON_TER     146     146
SQ   SEQUENCE   146 AA;  16216 MW;  92460F1FDF1B7538 CRC64;

  Query Match             53.0%;  Score 340;  DB 11;  Length 146;
  Best Local Similarity   54.0%;  Pred. No. 2.7e-28;
  Matches   68;  Conservative   22;  Mismatches   28;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS---RDLLLFPHHALSPWGRGT 117
              :: |: :  :| |: : || |:|||| |||:||||||||      | | :     ||:||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARSYYGSSLYYFDY-----WGQGT 115

Qy        118 MVTVSS 123
               :||||
Db        116 TLTVSS 121


RESULT 30
Q924R7
ID   Q924R7      PRELIMINARY;      PRT;   143 AA.
AC   Q924R7;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067782; BAB63267.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1       1
FT   NON_TER     143     143
SQ   SEQUENCE   143 AA;  15648 MW;  51894D22EA9FDD47 CRC64;

  Query Match             52.8%;  Score 338.5;  DB 11;  Length 143;
  Best Local Similarity   53.7%;  Pred. No. 3.8e-28;
  Matches   66;  Conservative   22;  Mismatches   30;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:||||||:  :     : |   || || ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAKRSN-----YGAFDVWGTGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 31
Q924R2
ID   Q924R2      PRELIMINARY;      PRT;   140 AA.
AC   Q924R2;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067788; BAB63273.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1       1
FT   NON_TER     140     140
SQ   SEQUENCE   140 AA;  15361 MW;  60739B790FC6AF24 CRC64;

  Query Match             52.7%;  Score 338;  DB 11;  Length 140;
  Best Local Similarity   54.5%;  Pred. No. 4.2e-28;
  Matches   67;  Conservative   21;  Mismatches   27;  Indels    8;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||         :|   ||:|| ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARI--------YAGDYWGQGTSVT 112
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Qy        121 VSS 123
              |||
Db        113 VSS 115


RESULT 32
Q8VDC9
ID   Q8VDC9      PRELIMINARY;      PRT;   168 AA.
AC   Q8VDC9;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-MOG Z12 variable gamma 2a (Fragment).
GN   IGG2A.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
R    STRAIN=BALB/c;
R    Chernajovsky Y.;
RL   Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Sembi P.;
RT   "Targeting T cells to the CNS.";
RL   Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ416332; CAC94867.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER     168     168
SQ   SEQUENCE   168 AA;  18293 MW;  1E3719FCC0E72723 CRC64;

  Query Match             52.7%;  Score 338;  DB 11;  Length 168;
  Best Local Similarity   53.7%;  Pred. No. 5.2e-28;
  Matches   66;  Conservative   20;  Mismatches   33;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||:  |||:||::||||:| ||::  |:||:| || ||||:| |:|  |    |
Db         20 QVQLQQSGAELMKPGASVKISCKATGYTFSSYWIDWVKQRPGHGLEWIGEILPGSGRTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:|:   ||| |: || :: ||| |||:||||||       :       || || ||
R          80 NEKFKGKTTFTADTSSNTAYIQFSSLTSEDSAVYYCANYGSSRWY----FDVWGAGTTVT 135

Qy        121 VSS 123
              |||
Db        136 VSS 138


RESULT 33
Q99L25
ID   Q99L25      PRELIMINARY;      PRT;   473 AA.
AC   Q99L25;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Similar to RIKEN cDNA 1810060O09 gene.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Strausberg R.;
RL   Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC003888; AAH03888.1; -.
DR   HSSP; P01842; 7FAB.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 3.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
SQ   SEQUENCE   473 AA;  52449 MW;  BE9889B7986DA155 CRC64;

  Query Match             52.7%;  Score 337.5;  DB 11;  Length 473;
  Best Local Similarity   51.6%;  Pred. No. 2.1e-27;
  Matches   64;  Conservative   27;  Mismatches   32;  Indels    1;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||  ||: |||:||::||| || || :: |:||:| | |||||:| | |   |: ||
Db         20 QVQLQQSDAELVKPGASVKISCKVSGYTFTDHTIHWVKQRPEQGLEWIGYIYPRDGSTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLL-FPHHALSPWGRGTMV 119
              :: |:|:  :|||:|: || |:|:|| |||:|| :|:|   :   :  :    ||:|| :
Db         80 NEKFKGKATLTADKSSSTAYMQLNSLTSEDSAVCFCSRGGSIYYGYGLYYFDYWGQGTTI 139

Qy        120 TVSS 123
              ||||
Db        140 TVSS 143


RESULT 34
Q8K0Z4
ID   Q8K0Z4      PRELIMINARY;      PRT;   480 AA.
AC   Q8K0Z4;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Similar to expressed sequence AI893585.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Breast tumor;
RA   Strausberg R.;
RL   Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC029188; AAH29188.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00409; IG; 3.
DR   SMART; SM00407; IGc1; 3.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 2.
SQ   SEQUENCE   480 AA;  51645 MW;  8690A63C669CDBED CRC64;

  Query Match             52.6%;  Score 337;  DB 11;  Length 480;
  Best Local Similarity   52.8%;  Pred. No. 2.5e-27;
  Matches   65;  Conservative   27;  Mismatches   25;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||  |: |||: |::||||||  || :  |:|::| |||| ||:| | |   |:::|
Db         20 QVQLQQSGPELVKPGALVKISCKASGYTFTSFDISWMKQRPGQGPEWIGWISPGDGSSEY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:|:  :|||:|: || | |||| ||::|||:||||:       : ||:||:||
Db         80 NEKFKGKATLTADKSSNTAYMHLSSLTSENSAVYFCARSK------LGGFAYWGQGTLVT 133

Qy        121 VSS 123
              ||:
Db        134 VSA 136
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RESULT 35
Q924P8
ID   Q924P8      PRELIMINARY;      PRT;   140 AA.
AC   Q924P8;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   V23-D-J-C mu protein (Fragment).
GN   V23-D-J-C MU.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB069917; BAB63933.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     140    140
SQ   SEQUENCE   140 AA;  15392 MW;  904C80C82548C936 CRC64;

  Query Match             52.4%;  Score 336;  DB 11;  Length 140;
  Best Local Similarity   52.8%;  Pred. No. 6.8e-28;
  Matches   65;  Conservative   21;  Mismatches   29;  Indels    8;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| | |: |||:||::|||||| || :  ::||:| |||||||:| | |  |   |
Db          1 QVQLQQPGTELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGQGLEWIGNINPSNGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |:|: ||  :|||| |||:||||||: |           ||:|| :|
Db         61 NEKFKSKATLTVDKSSSTACTQLSSLTSEDSAVYYCARNWD--------FDYWGQGTTLT 112

Qy        121 VSS 123
               |||
Db        113 VSS 115


RESULT 36
Q924Q8
ID   Q924Q8      PRELIMINARY;      PRT;   146 AA.
AC   Q924Q8;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067792; BAB63277.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     146    146
SQ   SEQUENCE   146 AA;  16023 MW;  4B04959991D49159 CRC64;

  Query Match             52.4%;  Score 336;  DB 11;  Length 146;
  Best Local Similarity   53.2%;  Pred. No. 7.2e-28;
  Matches   67;  Conservative   23;  Mismatches   28;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  : ||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMRWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP---WGRGT 117
              :: |: :  :| |: : || |:|||| |||:|||||||:     |    ::|   ||:||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCART-----FITTVVAPFDYWGQGT 115

Qy        118 MVTVSS 123
                :||||
Db        116 TLTVSS 121


RESULT 37
Q924R5
ID   Q924R5      PRELIMINARY;      PRT;   139 AA.
AC   Q924R5;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067784; BAB63269.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     139    139
SQ   SEQUENCE   139 AA;  15221 MW;  8491E2F85614736A CRC64;

  Query Match             52.3%;  Score 335.5;  DB 11;  Length 139;
  Best Local Similarity   55.3%;  Pred. No. 7.6e-28;
  Matches   68;  Conservative   22;  Mismatches   24;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: |  :| |: : || |:|||| |||:||||||     ||    | : ||:||:||
Db         61 NEKFKSRATLTVDKPSSTAYMQLSSLTSEDSAVYYCA-----LL----AEAYWGQGTLVT 111

Qy        121 VSS 123
               ||:
Db        112 VSA 114
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RESULT 38
Q91V67
ID   Q91V67      PRELIMINARY;      PRT;   143 AA.
AC   Q91V67;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (V304-D-J-C mu protein) (Fragment).
GN   V304-D-J-C MU.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB069912; BAB63928.1; -.
DR   EMBL; AB069914; BAB63930.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1       1
FT   NON_TER     143     143
SQ   SEQUENCE   143 AA;  15775 MW;  91BC6012B44EFEBF CRC64;

  Query Match             52.3%;  Score 335.5;  DB 11;  Length 143;
  Best Local Similarity   55.3%;  Pred. No. 7.9e-28;
  Matches   68;  Conservative   18;  Mismatches   32;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: :||:||::|||||| || :  ::||:| |||||||:| | |      |
Db          1 QVQLQQPGAELVRPGTSVKLSCKASGYTFTSYWMHWVKQRPGQGLEWIGVIDPSDSYTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :| | |: || |:|||| |||:|||||| : |    |       || || ||
Db         61 NQKFKGKATLTVDTSSSTAYMQLSSLTSEDSAVYYCAPTVDDWYF-----DVWGTGTTVT 115

Qy        121 VSS 123
              |||
[redacted]116 VSS 118


RESULT 39
Q91WT1
ID   Q91WT1      PRELIMINARY;      PRT;   481 AA.
AC   Q91WT1;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical 52.1 kDa protein.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Colon;
RA   Strausberg R.;
RL   Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC013490; AAH13490.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 4.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 2.
KW   Hypothetical protein.
SQ   SEQUENCE   481 AA;  52105 MW;  97DF68D159463F65 CRC64;

  Query Match             52.3%;  Score 335;  DB 11;  Length 481;
  Best Local Similarity   54.5%;  Pred. No. 4e-27;
  Matches   67;  Conservative   19;  Mismatches   31;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| ||| |: |||:||::|||||| || :  |:||:| ||||| |:| | |  |  ||
Db         20 QVQLLQSGPELVKPGASVKISCKASGYTFTSYYIHWVKQRPGQGLVWIGWIYPGDGNTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:|:  :|||:|: || | |||| |||:|||:| |          |   ||:|| :|
Db         80 NEKFKGKTTLTADKSSSTAYMFLSSLTSEDSAVYFCTRGGG------WAFDYWGQGTTLT 133

Qy        121 VSS 123
              |||
Db        134 VSS 136


RESULT 40
Q924Q4
ID   Q924Q4      PRELIMINARY;      PRT;   141 AA.
AC   Q924Q4;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067796; BAB63281.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1       1
FT   NON_TER     141     141
SQ   SEQUENCE   141 AA;  15561 MW;  DDD80482D66B76A0 CRC64;

  Query Match             52.2%;  Score 334.5;  DB 11;  Length 141;
  Best Local Similarity   52.8%;  Pred. No. 9.9e-28;
  Matches   65;  Conservative   23;  Mismatches   28;  Indels    7;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:|||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||          :  : ||:|| :|
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARD-------DYGRTFWGQGTTLT 113

Qy        121 VSS 123
              |||
Db        114 VSS 116


RESULT 41
Q924R3
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ID   Q924R3      PRELIMINARY;      PRT;   145 AA.
AC   Q924R3;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067787; BAB63272.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  15996 MW;  35B1A36E4280BA81 CRC64;

  Query Match             52.2%;  Score 334.5;  DB 11;  Length 145;
  Best Local Similarity   54.5%;  Pred. No. 1e-27;
  Matches   67;  Conservative   20;  Mismatches   33;  Indels    3;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| ||| ||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||     |   :     || || ||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCARG---LYDGNWYFDVWGTGTTVT 117

Qy        121 VSS 123
              |||
Db        118 VSS 120


RESULT 42
Q921A6
ID   Q921A6      PRELIMINARY;      PRT;   241 AA.
AC   Q921A6;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-CEA 79 single chain Fv fragment (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98170165; PubMed=9509426;
RA   Chung J.H., Choi S.J., Kim H.J., Kim I.J., Choi I.H., Lee S.D.,
RA   Yi K.S., Suh P.G., Ryu S.H., Chung H.K.;
RT   "Cloning and characterization of cDNAs encoding VH and VL of a
RT   monoclonal anti-CEA antibody (CEA 79) cross-reactive with NCA-95 and
RT   generation of a single-chain Fv molecule (scFv).";
RL   Mol. Cells 7:816-819(1997).
DR   EMBL; U88067; AAB48044.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 2.
DR   PROSITE; PS50835; IG_LIKE; 2.
FT   NON_TER       1      1
FT   NON_TER     241    241
SQ   SEQUENCE   241 AA;  26086 MW;  0276887248E9C771 CRC64;

  Query Match             52.2%;  Score 334.5;  DB 11;  Length 241;
  Best Local Similarity   52.0%;  Pred. No. 1.9e-27;
  Matches   64;  Conservative   26;  Mismatches   28;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||:|||||  |:|||| :|::|||||| || :  :|||:||||:||:||| |     |    |
Db          1 QVKLQQSGPELKKPGETVKISCKASGYTFTDYGMNWVKQAPGKGLKWMGWINTYTGEPTY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : :|:|| | : : |  || :::::|::|||| |:||| :||| :       ||:|| ||
Db         61 ADDFKGRFAFSLETSASTAYLQINNLKNEDTATYFCAR-KDLLRY----FDYWGQGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 43
Q9QXF0
ID   Q9QXF0      PRELIMINARY;      PRT;   117 AA.
AC   Q9QXF0;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Immunoglobulin heavy chain V-D-J region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Clemens A., Rademaekers A., Specht C., Koelsch E.;
RL   Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ225171; CAB65236.1; -.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  13060 MW;  D816AD0858A47E4C CRC64;

  Query Match             52.1%;  Score 334;  DB 11;  Length 117;
  Best Local Similarity   52.0%;  Pred. No. 8.9e-28;
  Matches   64;  Conservative   24;  Mismatches   29;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||| |: |||:||::|||||| || :  : ||:|: |: |||:| | |  |   |
Db          1 EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :| |:|: || |:|:|| |||:|||||| :|     :     ||:|| :|
Db         61 NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDKD------YYFDYWGQGTTLT 114

Qy        121 VSS 123
              |||
Db        115 VSS 117


RESULT 44
Q920E8
ID   Q920E8      PRELIMINARY;      PRT;   120 AA.
AC   Q920E8;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
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DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Pterin-mimicking anti-idiotope heavy chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Atkin J.D., Iape A., Jennings I.G., Horaitis O., Cotton R.G.H.;
RT   "Definition of the Idiotope of Pterin-Mimicking Antibodies Expressed
RT   in Mammalian Cells.";
RL   Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF307936; AAL09420.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13204 MW;  DC4834AB1DE56F3C CRC64;

  Query Match             52.1%;  Score 334;  DB 11;  Length 120;
  Best Local Similarity   50.4%;  Pred. No. 9.2e-28;
  Matches   64;  Conservative   25;  Mismatches   26;  Indels   12;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||||  |::|||:||::|||||| :|    :|||:|: |: |||:| | | :|   |
Db          1 EVQLQQSGPELEKPGASVKISCKASGYSFTGYNMNWVKQSNGKSLEWIGNIDPYYGGTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP-----WGR 115
              :| |:|:  :| |:|: || |:| || |||:||||||          ::  ||     ||:
Db         61 NQKFKGKATLTVDKSSSTAYMQLKSLTSEDSAVYYCA-------VIYYGNSPAWFAYWGQ 113

Qy        116 GTMVTVS 122
              ||:||||
Db        114 GTLVTVS 120


RESULT 45
Q91VA2
ID   Q91VA2      PRELIMINARY;      PRT;   143 AA.
AC   Q91VA2;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067786; BAB63271.1; -.
DR   EMBL; AB069911; BAB63927.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     143    143
SQ   SEQUENCE   143 AA;  15617 MW;  51952152F6F3AD47 CRC64;

  Query Match             52.0%;  Score 333.5;  DB 11;  Length 143;
  Best Local Similarity   52.8%;  Pred. No. 1.3e-27;
  Matches   65;  Conservative   22;  Mismatches   31;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||  |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: :  | |:|||| |||:||||||:  :     : |   || || ||
Db         61 NEKFKSKATLTVDKPSSAAYMQLSSLTSEDSAVYYCAKRSN-----YGAFDVWGTGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 46
Q924Q7
ID   Q924Q7      PRELIMINARY;      PRT;   145 AA.
AC   Q924Q7;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067793; BAB63278.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  16141 MW;  55A59A7908B2CD6A CRC64;

  Query Match             51.9%;  Score 332.5;  DB 11;  Length 145;
  Best Local Similarity   52.4%;  Pred. No. 1.7e-27;
  Matches   66;  Conservative   24;  Mismatches   27;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||  |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALS---PWGRGT 117
              :: |: :  :| |: : || |:|||| |||:|||||||      : ::  |    ||:||
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR------YDYYGSSYFDYWGQGT 114

Qy        118 MVTVSS 123
              :||||
Db        115 TLTVSS 120


RESULT 47
Q924R6
ID   Q924R6      PRELIMINARY;      PRT;   137 AA.
AC   Q924R6;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   VH186.2-D-J-C mu protein (Fragment).
```

```
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB067783; BAB63268.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     137    137
SQ   SEQUENCE   137 AA;  15171 MW;  5C38D966DC6A4124 CRC64;

  Query Match             51.7%;  Score 331.5;  DB 11;  Length 137;
  Best Local Similarity   52.8%;  Pred. No. 2e-27;
  Matches   65;  Conservative   21;  Mismatches   26;  Indels   11;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db          1 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |: :  :| |: : || |:|||| |||:|||||||              ||:|| :|
Db         61 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR----------WDYWGQGTTLT 109

Qy        121 VSS 123
              |||
Db        110 VSS 112


RESULT 48
Q924P9
ID   Q924P9      PRELIMINARY;      PRT;   143 AA.
AC   Q924P9;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   V303-D-J-C mu protein (Fragment).
GN   V303-D-J-C MU.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RA   Kozono Y., Kozono H., Azuma T.;
RT   "Direct Estimation of Relative Affinity by Flow Cytometry Reveals
RT   Affinity Maturation of B Cell Antigen Receptors in Response to (4-
RT   Hydroxy-3-Nitrophenyl)Acetyl (NP).";
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB069916; BAB63932.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     143    143
SQ   SEQUENCE   143 AA;  15704 MW;  43CD8C72D52134F6 CRC64;

  Query Match             51.6%;  Score 330.5;  DB 11;  Length 143;
  Best Local Similarity   54.0%;  Pred. No. 2.7e-27;
  Matches   68;  Conservative   18;  Mismatches   29;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  : ||:| |||||||:| | |      |
Db          1 QVQLQQLGAELVKPGASVKLSCKASGYTFTSYWMQWVKQRPGQGLEWIGEIDPSDSYTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP---WGRGT 117
              :| |:|:  :| | |: || |:|||| |||:||||||          |:  |    ||:||
Db         61 NQKFKGKATLTVDTSSSTAYMQLSSLTSEDSAVYYCA--------SHYYGSSSDYWGQGT 112

Qy        118 MVTVSS 123
               :||||
Db        113 TLTVSS 118


RESULT 49
Q99L31
ID   Q99L31      PRELIMINARY;      PRT;   468 AA.
AC   Q99L31;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Similar to RIKEN cDNA 1810060O09 gene.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Strausberg R.;
RL   Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC003878; AAH03878.1; -.
DR   HSSP; P01842; 7FAB.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 3.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 4.
DR   PROSITE; PS00290; IG_MHC; 1.
SQ   SEQUENCE   468 AA;  51661 MW;  96352328B3332ADB CRC64;

  Query Match             51.5%;  Score 330;  DB 11;  Length 468;
  Best Local Similarity   53.7%;  Pred. No. 1.3e-26;
  Matches   66;  Conservative   23;  Mismatches   30;  Indels    4;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||||||: :||:||::|| |||    :: ::||:| | |||||:| | |  |  ||
Db         20 EVQLQQSGAELVRPGASVKLSCTASGFNIKDSLMHWVKQRPEQGLEWIGWIDPEDGETKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :  || :  |||| |: || ::|||| |||||:|||||:   ||:  :    ||:|| :|
Db         80 APKFQDKATITADTSSNTAYLQLSSLTSEDTAIYYCARN---LLYGGY-YDYWGQGTTIT 135

Qy        121 VSS 123
              |||
Db        136 VSS 138


RESULT 50
Q925S3
ID   Q925S3      PRELIMINARY;      PRT;   147 AA.
AC   Q925S3;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   MRP3.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
```

```
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RX   PubMed=11819679;
RA   Cui D., Zeng G., Yan X., Wang F., Tian F., Ren D., Zhao T., Li X.,
RA   Su C.;
RT   "Mechanism of exogenous nucleic acids and their precursors improving
RT   the repair of intestinal epithelium after irradiation in mice.";
RL   World J. Gastroenterol. 6:709-717(2000).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Cui D., Zeng G., Yan X., Li X., Su C.;
RT   "Cloning of mouse genes related to repairing of intestinal epithelium
RT   of the irradiated mice by treatment with the intestinal RNA of mice of
RT   the same strain.";
RL   Int. J. Radiat. Biol. Relat. Stud. Phys. Chem. Med. 19:71-80(2001).
DR   EMBL; AF240166; AAK43731.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
SQ   SEQUENCE   147 AA;  16274 MW;  800594A12B97191F CRC64;

  Query Match             51.3%;  Score 329;  DB 11;  Length 147;
  Best Local Similarity   52.8%;  Pred. No. 4e-27;
  Matches   65;  Conservative   21;  Mismatches   33;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||:| ||| || |||:||::|||||  | :  |:|||| | |||||:| | |  |: :|
Db          3 QVKLHQSGPEVVKPGASVKLSCKASGYIFTSYDIDWVRQTPEQGLEWIGWIFPGEGSTEY 62

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :: |:||  :: |:|: || |||: | |||:|||:|||      :       ||:|| ||
Db         63 NEKFKGRATLSVDKSSSTAYMELTRLTSEDSAVYFCARGD----YYRRYFDLWGQGTTVT 118

Qy        121 VSS 123
              |||
Db        119 VSS 121


Search completed: November 26, 2003, 13:41:01
Job time : 33.0641 secs
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:30:14 ; Search time 10.5128 Seconds
(without alignments)
550.212 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 127863 seqs, 47026705 residues

[redacted] number of hits satisfying chosen parameters: 127863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	421	65.7	117	1	HV1A_HUMAN	P01742 homo sapien
2	370	57.7	117	1	HV1B_HUMAN	P01743 homo sapien
3	362.5	56.6	147	1	HV1C_HUMAN	P01744 homo sapien
4	345	53.8	117	1	HV1G_HUMAN	P23083 homo sapien
5	341	53.2	120	1	HV03_MOUSE	P01747 mus musculu
6	336	52.4	138	1	HV48_MOUSE	P03980 mus musculu
7	336	52.4	140	1	HV02_MOUSE	P01746 mus musculu
8	335.5	52.3	114	1	HV00_MOUSE	P01741 mus musculu
9	334	52.1	125	1	HV1F_HUMAN	P06326 homo sapien
10	332.5	51.9	139	1	HV07_MOUSE	P01751 mus musculu
11	331	51.6	117	1	HV13_MOUSE	P01757 mus musculu
12	330.5	51.6	137	1	HV11_MOUSE	P01755 mus musculu
13	329.5	51.4	118	1	HV51_MOUSE	P06330 mus musculu
14	329	51.3	117	1	HV12_MOUSE	P01756 mus musculu
15	329	51.3	121	1	HV01_MOUSE	P01745 mus musculu
16	324	50.5	117	1	HV52_MOUSE	P06327 mus musculu
17	313.5	48.9	124	1	HV1D_HUMAN	P01760 homo sapien
18	311.5	48.6	120	1	HV1H_HUMAN	P80421 homo sapien
19	310.5	48.4	120	1	HV50_MOUSE	P06329 mus musculu
20	310	48.4	117	1	HV05_MOUSE	P01749 mus musculu
21	309.5	48.3	124	1	HV1E_HUMAN	P01761 homo sapien
22	309	48.2	119	1	HV3I_HUMAN	P01770 homo sapien
23	307	47.9	117	1	HV06_MOUSE	P01750 mus musculu
24	304.5	47.5	122	1	HV3G_HUMAN	P01768 homo sapien
25	304	47.4	117	1	HV04_MOUSE	P01748 mus musculu
26	304	47.4	117	1	HV09_MOUSE	P01753 mus musculu
27	299	46.6	117	1	HV49_MOUSE	P06328 mus musculu
28	297.5	46.4	114	1	HV3B_HUMAN	P01763 homo sapien
29	297	46.3	117	1	HV14_MOUSE	P01758 mus musculu
30	297	46.3	121	1	HV3J_HUMAN	P01771 homo sapien
31	296	46.2	117	1	HV10_MOUSE	P01754 mus musculu
32	295	46.0	136	1	HV15_MOUSE	P01759 mus musculu
33	286.5	44.7	136	1	HV16_MOUSE	P01783 mus musculu
34	285	44.5	115	1	HV3D_HUMAN	P01765 homo sapien
35	284	44.3	117	1	HV42_MOUSE	P01812 mus musculu
36	277.5	43.3	122	1	HV3H_HUMAN	P01769 homo sapien
37	275.5	43.0	119	1	HV40_MOUSE	P01810 mus musculu
38	275	42.9	115	1	HV3F_HUMAN	P01767 homo sapien
39	272	42.4	117	1	HV02_CANFA	P01785 canis famil
40	271.5	42.4	119	1	HV37_MOUSE	P01807 mus musculu
41	268.5	41.9	119	1	HV38_MOUSE	P01808 mus musculu
42	266.5	41.6	119	1	HV3P_HUMAN	P01777 homo sapien
43	266.5	41.6	122	1	HV3A_HUMAN	P01762 homo sapien
44	265	41.3	117	1	HV3C_HUMAN	P01764 homo sapien
45	264.5	41.3	116	1	HV3T_HUMAN	P01781 homo sapien

ALIGNMENTS

RESULT 1
HV1A_HUMAN
ID HV1A_HUMAN STANDARD; PRT; 117 AA.
AC P01742;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 15-SEP-2003 (Rel. 42, Last annotation update)
DE Ig heavy chain V-I region EU.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE.
RX MEDLINE=71064024; PubMed=5489771;
RA Cunningham B.A., Rutishauser U., Gall W.E., Gottlieb P.D.,
RA Waxdal M.J., Edelman G.M.;
RT "The covalent structure of a human gamma G-immunoglobulin. VII. Amino
RT acid sequence of heavy-chain cyanogen bromide fragments H1-H4.";
RL Biochemistry 9:3161-3170(1970).
RN [2]
RP DISULFIDE BOND.
RX MEDLINE=71064027; PubMed=4923144;
RA Gall W.E., Edelman G.M.;
RT "The covalent structure of a human gamma G-immunoglobulin. X.
RT Intrachain disulfide bonds.";
RL Biochemistry 9:3188-3196(1970).
CC -!- MISCELLANEOUS: THE SEQUENCE OF THE GAMMA-1 C REGION OF THIS
CC MYELOMA PROTEIN HAS ALSO BEEN DETERMINED.
CC -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR PIR; A90563; G1HUEU.
DR HSSP; P01772; 2FB4.
DR GO; GO:0005576; C:extracellular; NAS.
DR GO; GO:0003823; F:antigen binding activity; NAS.
DR GO; GO:0006955; P:immune response; NAS.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
KW Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT DOMAIN 1 112 IG-LIKE.
FT MOD_RES 1 1 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 22 96
FT NON_TER 117 117
SQ SEQUENCE 117 AA; 12472 MW; 99D60ADAEBD52818 CRC64;

Query Match 65.7%; Score 421; DB 1; Length 117;
Best Local Similarity 71.0%; Pred. No. 3.9e-37;
Matches 88; Conservative 8; Mismatches 20; Indels 8; Gaps 2;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60
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```
Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
               :| ||||| ||||||| || ||||||||||| |:||         :    ||    | :|
Db          61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy         120 TVSS 123
               ||||
Db         114 TVSS 117


RESULT 2
HV1B_HUMAN
ID   HV1B_HUMAN     STANDARD;      PRT;   117 AA.
AC   P01743;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-I region HG3 precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83144028; PubMed=6298778;
RA   Rechavi G., Ram D., Glazer L., Zakut R., Givol D.;
RT   "Evolutionary aspects of immunoglobulin heavy chain variable region
RT   (VH) gene subgroups.";
RL   Proc. Natl. Acad. Sci. U.S.A. 80:855-859(1983).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00240; AAA52988.1; -.
DR   PIR; A02024; HVUHUG.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V-I REGION HG3.
FT   DOMAIN       20   >117       IG-LIKE.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12946 MW;  2D3F92FC60CD1FE7 CRC64;

  Query Match             57.7%;  Score 370;  DB 1;  Length 117;
  Best Local Similarity   74.5%;  Pred. No. 8.2e-32;
  Matches   73;  Conservative    8;  Mismatches   17;  Indels    0;  Gaps    0;

Qy           1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
               |||| |||||||||:||:||||||| |||:  ::|||||||||||||| | |  |:  |
Db          20 QVQLVQSGAEVKKPGASVKVSCKASGYTFNSYYMHWVRQAPGQGLEWMGIINPSGGSTSY 79

Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
               :| ||||| :| | || |  ||||||||||||||||||
Db          80 AQKFQGRVTMTRDTSTSTVYMELSSLRSEDTAVYYCAR 117


RESULT 3
HV1C_HUMAN
ID   HV1C_HUMAN     STANDARD;      PRT;   147 AA.
AC   P01744;
DT   21-JUL-1986 (Rel. 01, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-I region ND precursor (Fragments).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83065234; PubMed=6815656;
RA   Kenten J.H., Molgaard H.V., Houghton M., Derbyshire R.B., Viney J.,
RA   Bell L.O., Gould H.J.;
RT   "Cloning and sequence determination of the gene for the human
RT   immunoglobulin epsilon chain expressed in a myeloma cell line.";
RL   Proc. Natl. Acad. Sci. U.S.A. 79:6661-6665(1982).
RN   [2]
RP   SEQUENCE OF 20-147.
RA   Bennich H.H., Johansson S.G.O., von Bahr-Lindstrom H.;
RL   (In) Bach M.K. (eds.);
RL   Immediate hypersensitivity: modern concepts and developments, pp.1-36,
RL   Marcel Dekker, New York (1978).
CC   -!- MISCELLANEOUS: THIS EPSILON CHAIN WAS ISOLATED FROM A MYELOMA
CC       PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P01789; 1MCP.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; Pyrrolidone carboxylic acid.
FT   SIGNAL        1     19
FT   CHAIN        20    147       IG HEAVY CHAIN V-I REGION ND.
FT   DOMAIN       20    131       IG-LIKE.
FT   MOD_RES      20     20       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     41    115
FT   CONFLICT     21     21       T -> V (IN REF. 2).
FT   CONFLICT     53     54       IH -> HI (IN REF. 2).
FT   CONFLICT     67     68       VG -> GV (IN REF. 2).
FT   CONFLICT    125    125       MISSING (IN REF. 2).
FT   NON_TER     147    147
SQ   SEQUENCE   147 AA;  16491 MW;  948F9F72A5366C20 CRC64;

  Query Match             56.6%;  Score 362.5;  DB 1;  Length 147;
  Best Local Similarity   58.6%;  Pred. No. 6.5e-31;
  Matches   75;  Conservative   17;  Mismatches   31;  Indels    5;  Gaps    2;

Qy           1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
               | || ||||||:|||:|||||||||| || :: |:|:||||| ||||:| | |  |    |
Db          20 QTQLVQSGAEVRKPGASVRVSCKASGYTFIDSYIHWIRQAPGHGLEWVGWINPNSGGTNY 79

Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS----RDLLLFPH-HALSPWGR 115
               :  ||||| :| | |  || |:| ||||:|:||:|||:|     |   | : : |  ||:
Db          80 APRFQGRVTMTRDASFSTAYMDLRSLRSDDSAVFYCAKSDPFWSDYYNFDYSYTLDVWGQ 139

Qy         116 GTMVTVSS 123
               || |||||
Db         140 GTTVTVSS 147


RESULT 4
HV1G_HUMAN
ID   HV1G_HUMAN     STANDARD;      PRT;   117 AA.
AC   P23083;
DT   01-NOV-1991 (Rel. 20, Created)
DT   01-NOV-1991 (Rel. 20, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
```

```
DE   Ig heavy chain V-I region V35 precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=88296408; PubMed=2841108;
RA   Matsuda F., Lee K.H., Nakai S., Sato T., Kodaira M., Zong S.Q.,
RA   Ohno H., Fukuhara S., Honjo T.;
RT   "Dispersed localization of D segments in the human immunoglobulin
RT   heavy-chain locus.";
RL   EMBO J. 7:1047-1051(1988).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X07448; -; NOT_ANNOTATED_CDS.
DR   PIR; S00476; HVHU35.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V-I REGION V35.
FT   DOMAIN       20   >117       IG-LIKE.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  13009 MW;  BE61CE63F8CE97BD CRC64;

  Query Match             53.8%;  Score 345;  DB 1;  Length 117;
  Best Local Similarity   70.4%;  Pred. No. 3.4e-29;
  Matches   69;  Conservative    6;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||:||:||||||| ||    ::|||||||||||||| | |   |    |
Db         20 QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGRINPNSGGTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| |||||  | | |  || |||| |||:|| ||||||
Db         80 AQKFQGRVTSTRDTSISTAYMELSRLRSDDTVVYYCAR 117


RESULT 5
HV03_MOUSE
ID   HV03_MOUSE     STANDARD;      PRT;   120 AA.
AC   P01747;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region 36-65.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83131846; PubMed=6186498;
RA   Siekevitz M., Gefter M.L., Brodeur P., Riblet R.,
RA   Marshak-Rothstein A.;
RT   "The genetic basis of antibody production: the dominant anti-arsonate
RT   idiotype response of the strain A mouse.";
RL   Eur. J. Immunol. 12:1023-1032(1982).
CC   -!- MISCELLANEOUS: FROM ANALYSIS OF THE SIZES OF SEVERAL OTHER
CC       DIFFERENTIATED GENES THAT HYBRIDIZE TO THIS ONE, THE AUTHORS
CC       CONCLUDE THAT ALL OF THESE V REGIONS HAVE REARRANGED TO THE SAME J
CC       SEGMENT, JH2.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Hybridoma.
FT   DOMAIN        1    111       IG-LIKE.
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13307 MW;  FF04E4A167B654AF CRC64;

  Query Match             53.2%;  Score 341;  DB 1;  Length 120;
  Best Local Similarity   55.7%;  Pred. No. 9e-29;
  Matches   68;  Conservative   21;  Mismatches   31;  Indels    2;  Gaps    1;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              |||||||||: : ||||::|||||| || :  ||||:| |||||||:| | |  |  ||:
Db          1 VQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRPGQGLEWIGYINPGNGYTKYN 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTV 121
              : |:|:  :| |:|: || |:| || ||| :|||:|||| :     :    ||:|| :||
Db         61 EKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARS--VYYGGSYYFDYWGQGTTLTV 118

Qy        122 SS 123
              ||
Db        119 SS 120


RESULT 6
HV48_MOUSE
ID   HV48_MOUSE     STANDARD;      PRT;   138 AA.
AC   P03980;
DT   23-OCT-1986 (Rel. 02, Created)
DT   23-OCT-1986 (Rel. 02, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region TEPC 1017 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=84248078; PubMed=6429663;
RA   Gilliam A.C., Shen A., Richards J.E., Blattner F.R., Mushinski J.F.,
RA   Tucker P.W.;
RT   "Illegitimate recombination generates a class switch from C mu to C
RT   delta in an IgD-secreting plasmacytoma.";
RL   Proc. Natl. Acad. Sci. U.S.A. 81:4164-4168(1984).
DR   PIR; A02033; HVMST7.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     20
FT   CHAIN        21    138       IG HEAVY CHAIN V REGION TEPC 1017.
FT   DOMAIN       21     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DOMAIN      118    127       COMPLEMENTARITY-DETERMINING-3.
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FT   DOMAIN      128    138       FRAMEWORK-4.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     138    138
SQ   SEQUENCE   138 AA;  15576 MW;  748157E4C6907B8E CRC64;

  Query Match             52.4%;  Score 336;  DB 1;  Length 138;
  Best Local Similarity   53.2%;  Pred. No. 3.5e-28;
  Matches   67;  Conservative   22;  Mismatches   27;  Indels   10;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || |  |:||:| |||||||:| | |  | : |
Db         20 QVQLQQPGAELVKPGASVQLSCKASGHTFTNYWIHWVKQRPGQGLEWIGEINPNDGRSNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS---RDLLLFPHHALSPWGRGT 117
              :: |: :  :| |:|: || |:|||  |: ||||||||    |  ::       ||:||
Db         80 NEKFKNKATLTVDKSSSTAYMQLSSLTPEEFAVYYCARSDGYYDWFVY-------WGQGT 132

Qy        118 MVTVSS 123
              :|| |:
Db        133 LVTFSA 138


RESULT 7
HV02_MOUSE
ID   HV02_MOUSE     STANDARD;      PRT;   140 AA.
AC   P01746;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region 93G7 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=A/J;
RX   MEDLINE=82152818; PubMed=6801765;
RA   Sims J., Rabbitts T.H., Estess P., Slaughter C., Tucker P.W.,
RA   Capra J.D.;
RT   "Somatic mutation in genes for the variable portion of the
RT   immunoglobulin heavy chain.";
RL   Science 216:309-311(1982).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00493; AAA38128.1; -.
DR   PIR; A94264; HVMSG7.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Hybridoma; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    140       IG HEAVY CHAIN V REGION 93G7.
FT   DOMAIN       20    139       IG-LIKE.
FT   NON_TER     140    140
SQ   SEQUENCE   140 AA;  15514 MW;  25A4CBBE31DA5CE8 CRC64;

  Query Match             52.4%;  Score 336;  DB 1;  Length 140;
  Best Local Similarity   53.1%;  Pred. No. 3.6e-28;
  Matches   68;  Conservative   21;  Mismatches   27;  Indels   12;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||||||: : ||||::|||||| || :  ||||:| |||||||:| | |  |    |
Db         20 EVQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRPGQGLEWIGYINPGNGYINY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPH-----HALSPWGR 115
              :: |:|:  :| |:|: || |:| || ||| :|||:|||| |    :     ||:
Db         80 NEKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARS-------HYYGGSYDFDYWGQ 132

Qy        116 GTMVTVSS 123
              || :||||
Db        133 GTPLTVSS 140


RESULT 8
HV00_MOUSE
ID   HV00_MOUSE     STANDARD;      PRT;   114 AA.
AC   P01741;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region (Anti-arsonate antibody).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RC   STRAIN=A/J;
RX   MEDLINE=79195438; PubMed=109536;
RA   Capra J.D., Nisonoff A.;
RT   "Structural studies on induced antibodies with defined idiotypic
RT   specificities. VII. The complete amino acid sequence of the heavy
RT   chain variable region of anti-p-azophenylarsenate antibodies from A/J
RT   mice bearing a cross-reactive idiotype.";
RL   J. Immunol. 123:279-284(1979).
CC   -!- MISCELLANEOUS: ANTIBODY ISOLATED FROM TEN MICE WAS EXCLUSIVELY OF
CC       THE IGG1 SUBCLASS. THERE WAS NO HETEROGENEITY IN THE HEAVY CHAIN V
CC       REGION SEQUENCE.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02022; G1MSAA.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    106       IG-LIKE.
FT   NON_TER     114    114
SQ   SEQUENCE   114 AA;  12555 MW;  99DD8F0B6A69F4BE CRC64;

  Query Match             52.3%;  Score 335.5;  DB 1;  Length 114;
  Best Local Similarity   59.7%;  Pred. No. 3.2e-28;
  Matches   71;  Conservative   14;  Mismatches   29;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||||||: | ||||::||||:| ||::  : |||||||||| :| |         |
Db          1 EVQLQQSGAELVKAGSSVKMSCKATGYTFSSYELYWVRQAPGQGLEDLGYISSSSAYPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMV 119
              :| ||||| ||||||| || |||||||||||||:||     :          ||:||:|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAVYFCA-----VRVISRYFDGWGQGTLV 114


RESULT 9
HV1F_HUMAN
ID   HV1F_HUMAN     STANDARD;      PRT;   125 AA.
AC   P06326;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V-I region Mot.
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OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=86203277; PubMed=3084950;
RA   Kojima M., Koide T., Odani S., Ono T.;
RT   "Amino acid sequence of the variable region of heavy chain in
RT   immunoglobulin (Mot) having unusual papain cleavage sites.";
RL   Mol. Immunol. 23:169-174(1986).
DR   PIR; A02025; HVHUMO.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     98       V SEGMENT.
FT   DOMAIN       99    107       D SEGMENT.
FT   DOMAIN      108    125       J SEGMENT.
FT   DISULFID     22     96       BY SIMILARITY.
FT   NON_TER     125    125
SQ   SEQUENCE   125 AA;  13579 MW;  F4C4285D6DF0C8EA CRC64;

  Query Match             52.1%;  Score 334;  DB 1;  Length 125;
  Best Local Similarity   52.7%;  Pred. No. 5.1e-28;
  Matches   69;  Conservative   13;  Mismatches   35;  Indels   14;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||| |:||| ||  ||   |:|||||:|||||  : |      |
Db          1 QVQLVQSGAEVKKPGSSARLSCKVSGDDFNTYDIHWVRQAPGRGLEWMAVVHPSDDRTTY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHH--------ALSP 112
                | |  :| | || |  |||::| | |||:|||||       |:        :| |
Db         61 GPRSQARFTVTRDSSTTTVYMELTALISADTAIYYCARG------AHYSDTDDSGTSLGP 114

Qy        113 WGRGTMVTVSS 123
              ||:||:: |||
Db        115 WGQGTLLIVSS 125


RESULT 10
HV07_MOUSE
ID   HV07_MOUSE     STANDARD;      PRT;   139 AA.
AC   P01751; P01752;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region B1-8/186-2 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THE B1-8 MU CHAIN MRNA WAS CLONED FROM A HYBRIDOMA
CC       MAKING ANTIBODIES TO THE HAPTEN (4-HYDROXY-3-NITROPHENYL)ACETYL
CC       (NPB ANTIBODIES).
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00529; AAA38170.1; -.
DR   PIR; A90809; MHMS18.
DR   PDB; 1A6U; 27-MAY-98.
DR   PDB; 1A6W; 15-JUL-98.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; 3D-structure.
FT   SIGNAL        1     19
FT   CHAIN        20    139       IG HEAVY CHAIN V REGION B1-8/186-2.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DOMAIN      118    124       D SEGMENT.
FT   DOMAIN      125    139       JH2 SEGMENT.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     139    139
SQ   SEQUENCE   139 AA;  15419 MW;  1B57DD4FD0C9F465 CRC64;

  Query Match             51.9%;  Score 332.5;  DB 1;  Length 139;
  Best Local Similarity   52.4%;  Pred. No. 8.3e-28;
  Matches   66;  Conservative   24;  Mismatches   27;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db         20 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALS---PWGRGT 117
              :: |: :  :| |: : || |:|||| |||:|||||||      : ::  |    ||:||
Db         80 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR------YDYYGSSYFDYWGQGT 133

Qy        118 MVTVSS 123
                :||||
Db        134 TLTVSS 139


RESULT 11
HV13_MOUSE
ID   HV13_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01757;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region J558.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80078170; PubMed=6765983;
RA   Schilling J., Clevinger B., Davie J.M., Hood L.;
RT   "Amino acid sequence of homogeneous antibodies to dextran and DNA
RT   rearrangements in heavy chain V-region gene segments.";
RL   Nature 283:35-40(1980).
CC   -!- MISCELLANEOUS: THE SEQUENCES OF 10 HYBRIDOMA PROTEINS THAT ALSO
CC       BIND DEXTRAN DIFFER FROM THAT SHOWN AT 1-7 POSITIONS, MANY OF
CC       WHICH OCCUR IN THE D AND J SEGMENTS.
CC   -!- MISCELLANEOUS: THIS PROTEIN BINDS DEXTRAN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A26242; MHMSJ5.
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DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN       1    116       IG-LIKE.
FT   DISULFID     22    96       BY SIMILARITY.
FT   NON_TER     117   117
SQ   SEQUENCE   117 AA;  13024 MW;  292E2AF4BE447E41 CRC64;

  Query Match             51.6%;  Score 331;  DB 1;  Length 117;
  Best Local Similarity   52.8%;  Pred. No. 9.7e-28;
  Matches   65;  Conservative   21;  Mismatches   31;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||| |: |||:||::|||||| || :  : ||:|: |: |||:| | |  |   |
Db          1 EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :| |:|: || |:|:|| |||:||||||| |      :      || || ||
Db         61 NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDR------YWYFDVWGAGTTVT 114

Qy        121 VSS 123
             |||
Db        115 VSS 117


RESULT 12
HV11_MOUSE
ID   HV11_MOUSE     STANDARD;      PRT;   137 AA.
AC   P01755;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region S43 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THE GAMMA-2A CHAIN MRNA WAS CLONED FROM A HYBRIDOMA
CC       MAKING ANTIBODIES TO THE HAPTEN (4-HYDROXY-3-NITROPHENYL)ACETYL
CC       (NPB ANTIBODIES).
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00539; AAA38172.1; -.
DR   PIR; A02038; G2MS43.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL       1     19
FT   CHAIN       20    137       IG HEAVY CHAIN V REGION S43.
FT   DOMAIN      20     49       FRAMEWORK-1.
FT   DOMAIN      50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      55     68       FRAMEWORK-2.
FT   DOMAIN      69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      86    117       FRAMEWORK-3.
FT   DOMAIN     118    122       D SEGMENT.
FT   DOMAIN     123    137       JH2 SEGMENT.
FT   DISULFID    41    115       BY SIMILARITY.
FT   NON_TER    137    137
SQ   SEQUENCE   137 AA;  15200 MW;  ADD5881BF44B8EC9 CRC64;

  Query Match             51.6%;  Score 330.5;  DB 1;  Length 137;
  Best Local Similarity   53.7%;  Pred. No. 1.3e-27;
  Matches   66;  Conservative   21;  Mismatches   31;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||  |||:||::|||||| || :  ::|| | ||:||||:| | |  |   |
Db         20 QVQLQQPGAEFVKPGASVKLSCKASGYTFTSYLMHWVNQRPGRGLEWIGRIDPNSGGTTY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :::|: :  :| |: : || |:|||| |||:||||||| |    | :     ||:|| :|
Db         80 NEHFRSKATLTIDKPSSTAYMQLSSLTSEDSAVYYCARYRLGRYFDY-----WGQGTTLT 134

Qy        121 VSS 123
             |||
Db        135 VSS 137


RESULT 13
HV51_MOUSE
ID   HV51_MOUSE     STANDARD;      PRT;   118 AA.
AC   P06330;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region AC38 205.12.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=84182519; PubMed=6201362;
RA   Dildrop R., Bovens J., Siekevitz M., Beyreuther K., Rajewsky K.;
RT   "A V region determinant (idiotope) expressed at high frequency in B
RT   lymphocytes is encoded by a large set of antibody structural genes.";
RL   EMBO J. 3:517-523(1984).
DR   PIR; A02040; MHMS38.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN       1     98       V SEGMENT.
FT   DOMAIN      99    104       D SEGMENT.
FT   DOMAIN     105    118       J SEGMENT.
FT   DISULFID    22     96       BY SIMILARITY.
FT   NON_TER    118    118
SQ   SEQUENCE   118 AA;  12934 MW;  94F7BEE4C762A018 CRC64;

  Query Match             51.4%;  Score 329.5;  DB 1;  Length 118;
  Best Local Similarity   52.0%;  Pred. No. 1.4e-27;
  Matches   64;  Conservative   20;  Mismatches   34;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||| |: |||:||::|||||| || :  :|||:|: |: |||:| | |  |   |
Db          1 EVQLQQSGPELVKPGASVKISCKASGYTFTDYYMNWVKQSHGKSLEWIGDINPNNGGTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
```

```
           :| |:|:  :| |:|:    ||| || |||:|||||||      : :     || || ||
Db         61 NQKFKGKATLTVDKSSSATYMELRSLTSEDSAVYYCARG-----YGYDPFDVWGTGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 14
HV12_MOUSE
ID   HV12_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01756;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region MOPC 104E.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE, AND CARBOHYDRATE-LINKAGE SITE ASN-55.
RX   MEDLINE=83075344; PubMed=6816276;
RA   Kehry M.R., Fuhrman J.S., Schilling J.W., Rogers J., Sibley C.H.,
RA   Hood L.E.;
RT   "Complete amino acid sequence of a mouse mu chain: homology among
RT   heavy chain constant region domains.";
RL   Biochemistry 21:5415-5424(1982).
CC   -!- MISCELLANEOUS: THE SEQUENCE OF THE LIGHT CHAIN OF THIS IGM MYELOMA
CC       PROTEIN HAS ALSO BEEN DETERMINED.
CC   -!- MISCELLANEOUS: THIS PROTEIN BINDS DEXTRAN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02039; MHMS4E.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Glycoprotein.
FT   DOMAIN        1    116       IG-LIKE.
FT   DISULFID     22     96       BY SIMILARITY.
FT   CARBOHYD     55     55       N-LINKED (GLCNAC. . .) (COMPLEX).
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12983 MW;  3CF8ACE4BE447E41 CRC64;

  Query Match             51.3%;  Score 329;  DB 1;  Length 117;
  Best Local Similarity   52.8%;  Pred. No. 1.6e-27;
  Matches   65;  Conservative   20;  Mismatches   32;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||| |: |||:||::|||||| || :  : ||:|: |: |||:| | |   |    |
Db          1 EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGGTSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :| |:|: || |:|:|| |||:|||||||  |           || || ||
Db         61 NQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCARDYDWY------FDVWGAGTTVT 114

Qy        121 VSS 123
              |||
Db        115 VSS 117


RESULT 15
HV01_MOUSE
ID   HV01_MOUSE     STANDARD;      PRT;   121 AA.
AC   P01745;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region MPC 11.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=81053741; PubMed=6253904;
RA   Zakut R., Cohen J., Givol D.;
RT   "Cloning and sequence of the cDNA corresponding to the variable
RT   region of immunoglobulin heavy chain MPC11.";
RL   Nucleic Acids Res. 8:3591-3601(1980).
RN   [2]
RP   REVISIONS.
RA   Zakut R., Cohen J., Givol D.;
RL   Nucleic Acids Res. 8:4839-4840(1980).
CC   -!- MISCELLANEOUS: THIS SEQUENCE WAS TRANSLATED FROM AN MRNA ISOLATED
CC       FROM A MYELOMA THAT SECRETES IGG2B.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A93708; GVMS11.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    112       IG-LIKE.
FT   NON_TER     121    121
SQ   SEQUENCE   121 AA;  13135 MW;  227AEF3EC56ED0BF CRC64;

  Query Match             51.3%;  Score 329;  DB 1;  Length 121;
  Best Local Similarity   51.2%;  Pred. No. 1.6e-27;
  Matches   63;  Conservative   23;  Mismatches   35;  Indels    2;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              : |||||||: :||:||::||||:| || |  | ||:: || ||||:| | |   |    |
Db          1 EAQLQQSGAELVRPGTSVKISCKAAGYTFTNYWIGWVKERPGHGLEWIGDIYPGGGFTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : | :|:  :||| |: || ::|||| |||:|:|:|||       |:     ||:|| :|
Db         61 NDNLKGKATLTADTSSSTAYIQLSSLTSEDSAIYHCARGIYYNSSPY--FDSWGQGTTLT 118

Qy        121 VSS 123
              |||
Db        119 VSS 121


RESULT 16
HV52_MOUSE
ID   HV52_MOUSE     STANDARD;      PRT;   117 AA.
AC   P06327;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region VH558 A1/A4 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=85099340; PubMed=2578321;
RA   Yancopoulos G.D., Alt F.W.;
RT   "Developmentally controlled and tissue-specific expression of
RT   unrearranged VH gene segments.";
RL   Cell 40:271-281(1985).
CC   -----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
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CC   or send an email to license@isb-sib.ch).
CC   ------------------------------------------------------------------------
DR   EMBL; M13787; AAA38499.1; -.
DR   PIR; A02029; HVMSA1.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION VH558 A1/A4.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12971 MW;  8B0BC138856DFC9D CRC64;

  Query Match             50.5%;  Score 324;  DB 1;  Length 117;
  Best Local Similarity   61.2%;  Pred. No. 5.2e-27;
  Matches   60;  Conservative   19;  Mismatches   19;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||| |: ||| |::|||||| || :  ||||:| |||||||:| | |  |: ||
Db         20 QVQLQQSGPELVKPGALVKISCKASGYTFTSYDINWVKQRPGQGLEWIGWIYPGDGSTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :: |:|:  :|||:|: || |:|||| ||::|||:|||
Db         80 NEKFKGKATLTADKSSSTAYMQLSSLTSENSAVYFCAR 117


RESULT 17
HV1D_HUMAN
ID   HV1D_HUMAN     STANDARD;      PRT;   124 AA.
AC   P01760;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-I region WOL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=82046599; PubMed=7028111;
RA   Andrews D.W., Capra J.D.;
RT   "Amino acid sequence of the variable regions of heavy chains from two
RT   idiotypically cross-reactive human IgM anti-gamma-globulins of the Wa
RT   group.";
RL   Biochemistry 20:5822-5830(1981).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGM WITH ANTI-GAMMA
CC       GLOBULIN ACTIVITY.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02043; M1HUWL.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     124    124
SQ   SEQUENCE   124 AA;  13684 MW;  CB98F365D004EC8B CRC64;

  Query Match             48.9%;  Score 313.5;  DB 1;  Length 124;
  Best Local Similarity   56.2%;  Pred. No. 7e-26;
  Matches   72;  Conservative   11;  Mismatches   34;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||||| ||||| :    |||||||:||||:| |   |
Db          1 QVQLMQSGAEVKKPGSSVRVSCKTSGGTFVDYKGLWVRQAPGKGLEWVGQIPLRFNGEVK 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-----SRDLLLFPHHALSPWGR 115
              :    ||:::   |   | |||||| ||||||||||     : |   :       ||:
Db         61 NPGSVVRVSVSLKPSFNQAHMELSSLFSEDTAVYYCAREYGFDTSDYYYY------YWGQ 114

Qy        116 GTMVTVSS 123
              ||:|||||
Db        115 GTLVTVSS 122


RESULT 18
HV1H_HUMAN
ID   HV1H_HUMAN     STANDARD;      PRT;   120 AA.
AC   P80421;
DT   01-NOV-1995 (Rel. 32, Created)
DT   01-NOV-1995 (Rel. 32, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-I region DOT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=95255298; PubMed=7737190;
RA   Stoppini M., Bellotti V., Negri A., Merlini G., Garver F., Ferri G.;
RT   "Characterization of the two unique human anti-flavin monoclonal
RT   immunoglobulins.";
RL   Eur. J. Biochem. 228:886-893(1995).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    111       IG-LIKE.
FT   DISULFID     22     95       BY SIMILARITY.
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13272 MW;  F1307FD253A782F1 CRC64;

  Query Match             48.6%;  Score 311.5;  DB 1;  Length 120;
  Best Local Similarity   54.5%;  Pred. No. 1.1e-25;
  Matches   67;  Conservative   17;  Mismatches   34;  Indels    5;  Gaps    3;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||| ||| | | ||:|||:|||||| | |  |:||||||| ||||||   |: | |  |
Db          2 VQLVQSGVERKVPGASVRISCKASGYAFENYYIHWVRQAPGLGLEWMGIFNPVAG-AVSS 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-SRDLLLFPHHALSPWGRGTMVT 120
              : |: |: :::| |  | ||:| :|||:||  |:||| | |   |  : :  ||:|| |
Db         61 EKFRDRLVMSSDTSANTVSMQLRNLRSDDTGRYFCARVSYD---FSQYGMDVWGQGTTVI 117

Qy        121 VSS 123
              |||
Db        118 VSS 120
```

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RESULT 19
HV50_MOUSE
ID   HV50_MOUSE     STANDARD;      PRT;   120 AA.
AC   P06329;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region AC38 15.3.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=84182519; PubMed=6201362;
RA   Dildrop R., Bovens J., Siekevitz M., Beyreuther K., Rajewsky K.;
RT   "A V region determinant (idiotope) expressed at high frequency in B
RT   lymphocytes is encoded by a large set of antibody structural genes.";
RL   EMBO J. 3:517-523(1984).
DR   PIR; A02037; MHMS15.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     98       V SEGMENT.
FT   DOMAIN       99    105       D SEGMENT.
FT   DOMAIN      106    120       J SEGMENT.
FT   DISULFID     22     96       BY SIMILARITY.
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13311 MW;  914453F426F09834 CRC64;

  Query Match             48.4%;  Score 310.5;  DB 1;  Length 120;
  Best Local Similarity   50.0%;  Pred. No. 1.4e-25;
  Matches   63;  Conservative   18;  Mismatches   36;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| | | |: |||:|| :|||||| || :  ::|:|| |||||||:||| |  |   |
Db          1 QVQLLQPGTELVKPGASVNLSCKASGYTFTSYWMHWIRQRPGQGLEWIGGINPSNGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR---SRDLLLFPHHALSPWGRGT 117
              :: |: :  :| |:|:    |:||:  |||:|||||||      |            || ||
Db         61 NEKFKSKATLTVDKSSSATYMQLSTPTSEDSAVYYCARWDYEGD------RYFDVWGTGT 114

Qy        118 MVTVSS 123
              |||||
Db        115 TVTVSS 120


RESULT 20
HV05_MOUSE
ID   HV05_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01749;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   28-FEB-2003 (Rel. 41, Last annotation update)
DE   Ig heavy chain V region 3 precursor.
GN   IGH-VJ558.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THIS GERMLINE GENE BELONGS TO A SET OF CLOSELY
CC       RELATED GENES THAT COULD ENCODE V REGIONS OF NPB ANTIBODIES.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   use by non-profit institutions as long as its content is in no way
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00536; AAA38605.1; -.
DR   PIR; A02031; HVMS3.
DR   HSSP; P01810; 2FBJ.
DR   MGD; MGI:96486; Igh-VJ558.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION 3.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  13016 MW;  427C861C53975EDC CRC64;

  Query Match             48.4%;  Score 310;  DB 1;  Length 117;
  Best Local Similarity   59.2%;  Pred. No. 1.5e-25;
  Matches   58;  Conservative   17;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: :|||||::|||||| || :  ::||:| |||||||:| | |      |
Db         20 QVQLQQPGAELVRPGSSVKLSCKASGYTFTSYWMDWVKQRPGQGLEWIGNIYPSDSETHY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| |: :  :| |:|: || |:|||| |||:|||||||
Db         80 NQKFKDKATLTVDKSSSTAYMQLSSLTSEDSAVYYCAR 117


RESULT 21
HV1E_HUMAN
ID   HV1E_HUMAN     STANDARD;      PRT;   124 AA.
AC   P01761;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-I region SIE.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=82046599; PubMed=7028111;
RA   Andrews D.W., Capra J.D.;
RT   "Amino acid sequence of the variable regions of heavy chains from two
RT   idiotypically cross-reactive human IgM anti-gamma-globulins of the Wa
RT   group.";
RL   Biochemistry 20:5822-5830(1981).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGM WITH ANTI-GAMMA
CC       GLOBULIN ACTIVITY.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02044; M1HUSI.
DR   HSSP; P01825; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
```

```
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     124    124
SQ   SEQUENCE   124 AA;  13732 MW;  62CED4573BDEF59F CRC64;

  Query Match             48.3%;  Score 309.5;  DB 1;  Length 124;
  Best Local Similarity   53.4%;  Pred. No. 1.8e-25;
  Matches   70;  Conservative   15;  Mismatches   29;  Indels   17;  Gaps    4;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||||:|| |||||:   |:|||||||:||||:|        ||:
Db          1 QVQLVQSGAEVKKPGSSVRVTCKTSGGTFSGYTISWVRQAPGRGLEWVG------SPAKW 54

Qy         61 SQNFQG------RVAITADESTGTASMELSSLRSEDTAVYYCAR--SRDLLLFPHHALSP 112
              :  |||      || ::   |   | ||| :| :|| |||||||     : : |
Db         55 TDPFQGVYIKWERVTVSLKPSFNQAYMELVNLFNEDGAVYYCAREWKGQVNVNP---FDY 111

Qy        113 WGRGTMVTVSS 123
              ||:| :|||||
Db        112 WGQGVLVTVSS 122


RESULT 22
HV3I_HUMAN
ID   HV3I_HUMAN     STANDARD;      PRT;   119 AA.
AC   P01770;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region NIE.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=77070269; PubMed=826475;
RA   Ponstingl H., Hilschmann N.;
RT   "The rule of antibody structure. The primary structure of a
RT   monoclonal IgG1 immunoglobulin (myeloma protein Nie). III. The
RT   chymotryptic peptides of the H-chain, alignment of the tryptic
RT   peptides and discussion of the complete structure.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 357:1571-1604(1976).
RN   [2]
RP   DISULFIDE BOND.
RX   MEDLINE=77070267; PubMed=1002129;
RA   Dreker L., Schwarz J., Reichel W., Hilschmann N.;
RT   "Rule of antibody structure. The primary structure of a monoclonal
RT   IgG1 immunoglobulin (myeloma protein Nie), I: Purification and
RT   characterization of the protein, the L- and H-chains, the
RT   cyanogen bromide cleavage products, and the disulfide bridges.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 357:1515-1540(1976).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGG1 MYELOMA
CC       PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A91668; G1HUNI.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     96
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  13242 MW;  C96935A6E55E165B CRC64;

  Query Match             48.2%;  Score 309;  DB 1;  Length 119;
  Best Local Similarity   52.4%;  Pred. No. 2e-25;
  Matches   65;  Conservative   20;  Mismatches   33;  Indels    6;  Gaps    3;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAK- 59
              |||| |||  | :|| |:|:|| ||| ||:   |:||||||:||||:  ::    |  |
Db          1 QVQLVQSGGGVVQPGRSLRLSCAASGFTFSRYTIHWVRQAPGKGLEWV-AVMSYBGBBKH 59

Qy         60 YSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMV 119
              |: :  ||  |: ::|  |  : ::||| |||||||||| ||  :|  |    ||:||:|
Db         60 YADSVNGRFTISRNDSKNTLYLNMNSLRPEDTAVYYCARIRDTAMFFAH----WGQGTLV 115

Qy        120 TVSS 123
              ||||
Db        116 TVSS 119


RESULT 23
HV06_MOUSE
ID   HV06_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01750;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region 102 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THIS GERMLINE GENE BELONGS TO A SET OF CLOSELY
CC       RELATED GENES THAT COULD ENCODE V REGIONS OF NPB ANTIBODIES.
DR   PIR; A02032; HVMS02.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION 102.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12867 MW;  740A65DD851FCA8C CRC64;

  Query Match             47.9%;  Score 307;  DB 1;  Length 117;
  Best Local Similarity   60.4%;  Pred. No. 3.1e-25;
  Matches   58;  Conservative   16;  Mismatches   22;  Indels    0;  Gaps    0;
```

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Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||||| |||: |||:||:|||||||| || :  ::||:| |||||||:| | |       |:
Db         21 VQLQQPGAELVKPGASVKVSCKASGYTFTSYWMHWVKQRPGQGLEWIGRIHPSDSDTNYN 80

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA 97
              | |:|:  :| |:|: || |:|||| |||:||||||
Db         81 QKFKGKATLTVDKSSSTAYMQLSSLTSEDSAVYYCA 116


RESULT 24
HV3G_HUMAN
ID   HV3G_HUMAN     STANDARD;      PRT;   122 AA.
AC   P01768;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region CAM.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=81013859; PubMed=6774332;
RA   Lehman D.W., Putnam F.W.;
RT   "Amino acid sequence of the variable region of a human mu chain:
RT   location of a possible JH segment.";
RL   Proc. Natl. Acad. Sci. U.S.A. 77:3239-3243(1980).
CC   -!- MISCELLANEOUS: THIS MU CHAIN WAS ISOLATED FROM THE PLASMA OF A
CC       PATIENT WITH MACROGLOBULINEMIA.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02051; M3HUAM.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     122    122
SQ   SEQUENCE   122 AA;  13668 MW;  A42D0F17D252F1C2 CRC64;

  Query Match           47.5%;  Score 304.5;  DB 1;  Length 122;
  Best Local Similarity   50.8%;  Pred. No. 6e-25;
  Matches   63;  Conservative   26;  Mismatches   32;  Indels    3;  Gaps    3;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAK- 59
              ||:| :||  | :|| |:|:|| ||| ||:| |::|||| ||:||||:  :|   |  |
Db          1 QVELVESGGGVVZPGRSLRLSCAASGFTFSNYAMHWVRQPPGKGLEWV-AVISYBGBBKY 59

Qy         60 YSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMV 119
              |: : :||  |: |:|  |  ::::|||:|:|||||||| |  |   : | : ||:||:|
Db         60 YABSVKGRFTISRDBSKBTLYLQMNSLRAEBTAVYYCARDRP-LYGBYRAFNYWGQGTLV 118

Qy        120 TVSS 123
              ||||
Db        119 TVSS 122


RESULT 25
HV04_MOUSE
ID   HV04_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01748;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region 23 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THIS GERMLINE GENE BELONGS TO A SET OF CLOSELY
CC       RELATED GENES THAT COULD ENCODE V REGIONS OF NPB ANTIBODIES.
DR   PIR; A02030; HVMS23.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION 23.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   DISULFID     41    115       BY SIMILARITY.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12772 MW;  C530F829C906F69B CRC64;

  Query Match           47.4%;  Score 304;  DB 1;  Length 117;
  Best Local Similarity   58.2%;  Pred. No. 6.4e-25;
  Matches   57;  Conservative   18;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| | |: |||:||::|||||| || :  ::||:| |||||||:| | |   |   |
Db         20 QVQLQQPGTELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGQGLEWIGNINPGNGGTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :: |: :| :| |:|: ||  :|||| |||:|||||||
Db         80 NEKFKSKVTLTVDKSSSTAYTQLSSLTSEDSAVYYCAR 117


RESULT 26
HV09_MOUSE
ID   HV09_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01753; P11271;
DT   21-JUL-1986 (Rel. 01, Created)
DT   01-JUL-1989 (Rel. 11, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region 186-1 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THIS GERMLINE GENE BELONGS TO A SET OF CLOSELY
CC       RELATED GENES THAT COULD ENCODE V REGIONS OF NPB ANTIBODIES.
DR   PIR; D90809; HVMS61.
DR   HSSP; P01810; 2FBJ.
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DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL       1     19
FT   CHAIN       20    117       IG HEAVY CHAIN V REGION 186-1.
FT   DOMAIN      20     49       FRAMEWORK-1.
FT   DOMAIN      50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      55     68       FRAMEWORK-2.
FT   DOMAIN      69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      86    117       FRAMEWORK-3.
FT   DISULFID    41    115       BY SIMILARITY.
FT   NON_TER    117    117
SQ   SEQUENCE   117 AA;  12890 MW;  16191A088CB17F5A CRC64;

  Query Match             47.4%;  Score 304;  DB 1;  Length 117;
  Best Local Similarity   58.2%;  Pred. No. 6.4e-25;
  Matches   57;  Conservative   18;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||
Db         20 QVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :: |: :  :| | |: || |:| || |||:|||||||
Db         80 NEKFKSKATLTVDTSSSTAYMQLHSLTSEDSAVYYCAR 117


RESULT 27
HV49_MOUSE
ID   HV49_MOUSE     STANDARD;      PRT;   117 AA.
AC   P06328;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig heavy chain V region VH558 B4 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=85099340; PubMed=2578321;
RA   Yancopoulos G.D., Alt F.W.;
RT   "Developmentally controlled and tissue-specific expression of
RT   unrearranged VH gene segments.";
RL   Cell 40:271-281(1985).
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   use by non-profit institutions as long as its content is in no way
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M13788; AAA38506.1; -.
DR   PIR; A02035; MHMSB4.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL       1     19
FT   CHAIN       20    117       IG HEAVY CHAIN V REGION VH558 B4.
FT   DOMAIN      20     49       FRAMEWORK-1.
FT   DOMAIN      50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      55     68       FRAMEWORK-2.
FT   DOMAIN      69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      86    117       FRAMEWORK-3.
FT   DISULFID    41    115       BY SIMILARITY.
FT   NON_TER    117    117
SQ   SEQUENCE   117 AA;  12834 MW;  B8862FAC67ABD345 CRC64;

  Query Match             46.6%;  Score 299;  DB 1;  Length 117;
  Best Local Similarity   56.7%;  Pred. No. 2.1e-24;
  Matches   55;  Conservative   19;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||||| |||: |||:||::|||||| || :  ::||:| ||:||||:| | |  |  ||:
Db         21 VQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRPGRGLEWIGNIDPNSGGTKYN 80

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              : |: :  :| |: : || |:|||| |||:||||| |
Db         81 EKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCTR 117


RESULT 28
HV3B_HUMAN
ID   HV3B_HUMAN     STANDARD;      PRT;   114 AA.
AC   P01763;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region WEA.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=83273707; PubMed=6410398;
RA   Goni F., Frangione B.;
RT   "Amino acid sequence of the Fv region of a human monoclonal IgM
RT   (protein WEA) with antibody activity against 3,4-pyruvylated
RT   galactose in Klebsiella polysaccharides K30 and K33.";
RL   Proc. Natl. Acad. Sci. U.S.A. 80:4837-4841(1983).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS OBTAINED FROM A MONOCLONAL ANTIBODY
CC       AGAINST 3,4-PYRUVYLATED GALACTOSE AND ISOLATED FROM A PATIENT WITH
CC       WALDENSTROM'S MACROGLOBULINEMIA.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02046; M3HUWE.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN       1    112       IG-LIKE.
FT   MOD_RES      1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER    114    114
SQ   SEQUENCE   114 AA;  12256 MW;  D88294FB418A07B7 CRC64;

  Query Match             46.4%;  Score 297.5;  DB 1;  Length 114;
  Best Local Similarity   49.6%;  Pred. No. 3e-24;
  Matches   61;  Conservative   21;  Mismatches   32;  Indels    9;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||  ||  : :|| |:|:|| ||| ||: | :||||||||:||||:  |     |  |
Db          1 QVQLVDSGGGLVEPGGSLRLSCSASGFTFSANDMNWVRQAPGKGLEWLSFIGGSGSTIYY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :||  |: ::|  :  :::||||:|||||||||           |  ||:||:||
Db         61 ADSVKGRFTISRNBSKNSLYLQMSSLRAEDTAVYYCARG---------WLLNWGQGTLVT 111
```

```
Qy        121 VSS 123
              |||
Db        112 VSS 114


RESULT 29
HV14_MOUSE
ID   HV14_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01758;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region 108A precursor.
GN   IGH-VJ558.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=81245215; PubMed=6789211;
RA   Givol D., Zakut R., Effron K., Rechavi G., Ram D., Cohen J.B.;
RT   "Diversity of germ-line immunoglobulin VH genes.";
RL   Nature 292:426-430(1981).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00488; AAA38519.1; -.
DR   PIR; A02041; HVMS8A.
DR   HSSP; P01810; 2FBJ.
DR   MGD; MGI:96486; Igh-VJ558.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION 108A.
FT   DOMAIN       20   >117       IG-LIKE.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12972 MW;  428CB44DF25D1BC2 CRC64;

  Query Match             46.3%;  Score 297;  DB 1;  Length 117;
  Best Local Similarity   57.1%;  Pred. No. 3.5e-24;
  Matches   56;  Conservative   18;  Mismatches   24;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|||||| |: |||:||::|||||| || :  ::||:|: |: |||:| | |  |   |
Db         20 EVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSHGKSLEWIGYIYPYNGGTGY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| |: :  :| | |: || |||||| |||:|||||||
Db         80 NQKFKSKATLTVDNSSSTAYMELSSLTSEDSAVYYCAR 117


RESULT 30
HV3J_HUMAN
ID   HV3J_HUMAN     STANDARD;      PRT;   121 AA.
AC   P01771;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region HIL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=79124695; PubMed=420800;
RA   Chiu Y.-Y.H., Lopez de Castro J.A., Poljak R.J.;
RT   "Amino acid sequence of the VH region of human myeloma
RT   cryoimmunoglobulin IgG Hil.";
RL   Biochemistry 18:553-560(1979).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGG1 MYELOMA
CC       PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02054; G1HUHL.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     121    121
SQ   SEQUENCE   121 AA;  13566 MW;  480FC53610EF5DAB CRC64;

  Query Match             46.3%;  Score 297;  DB 1;  Length 121;
  Best Local Similarity   49.6%;  Pred. No. 3.6e-24;
  Matches   61;  Conservative   21;  Mismatches   39;  Indels    2;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||:| |:|  | :|| |:|:|| ||| ||:|  ::|||||||:||||:  |       |
Db          1 QVKLVQAGGGVVQPGRSLRLSCIASGFTFSNYGMHWVRQAPGKGLEWVAVIWYNGSRTYY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
                : :||  |: | |  |  |:::|||:||||||||||  |:|    :   ||:| :||
Db         61 GDSVKGRFTISRDNSKRTLYMZMNSLRTEDTAVYYCARDPDIL--TAFSFDYWGQGVLVT 118

Qy        121 VSS 123
              |||
Db        119 VSS 121


RESULT 31
HV10_MOUSE
ID   HV10_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01754; P11270;
DT   21-JUL-1986 (Rel. 01, Created)
DT   01-JUL-1989 (Rel. 11, Last sequence update)
DT   28-FEB-2003 (Rel. 41, Last annotation update)
DE   Ig heavy chain V region 145 precursor.
GN   IGH-VJ558.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6;
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
CC   -!- MISCELLANEOUS: THIS GERMLINE GENE BELONGS TO A SET OF CLOSELY
CC       RELATED GENES THAT COULD ENCODE V REGIONS OF NPB ANTIBODIES.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; J00533; AAA38602.1; -.
DR   PIR; C90809; HVMS45.
DR   HSSP; P01810; 2FBJ.
DR   MGD; MGI:96486; Igh-VJ558.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V REGION 145.
FT   DOMAIN       20     49       FRAMEWORK-1.
FT   DOMAIN       50     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     68       FRAMEWORK-2.
FT   DOMAIN       69     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       86    117       FRAMEWORK-3.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12921 MW;  D37DE8A3F543E996 CRC64;

  Query Match             46.2%;  Score 296;  DB 1;  Length 117;
  Best Local Similarity   57.1%;  Pred. No. 4.4e-24;
  Matches   56;  Conservative   19;  Mismatches   23;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||| |||: |||:||::| |||| || :  ::||:| ||:||||:| | |  |  ||
Db         20 QVQLQQPGAELVKPGASVKLSSKASGYTFTSYWMHWVKQRPGRGLEWIGRIDPNSGGTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :: |: :  :| |: : || |:|||| |||:|||||||
Db         80 NEKFKSKATLTVDKPSSTAYMQLSSLTSEDSAVYYCAR 117


RESULT 32
HV15_MOUSE
ID   HV15_MOUSE     STANDARD;      PRT;   136 AA.
AC   P01759;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region BCL1 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=82222262; PubMed=6806821;
RA   Knapp M.R., Liu C.-P., Newell N., Ward R.B., Tucker P.W., Strober S.,
RA   Blattner F.R.;
RT   "Simultaneous expression of immunoglobulin mu and delta heavy chains
RT   by a cloned B-cell lymphoma: a single copy of the VH gene is shared
RT   by two adjacent CH genes.";
RL   Proc. Natl. Acad. Sci. U.S.A. 79:2996-3000(1982).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------------
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CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; J00494; AAA38130.1; -.
DR   PIR; A02042; HVMSB1.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    136       IG HEAVY CHAIN V REGION BCL1.
FT   DOMAIN       20    135       IG-LIKE.
FT   NON_TER     136    136
SQ   SEQUENCE   136 AA;  15078 MW;  6827CFBC6DB3F35E CRC64;

  Query Match             46.0%;  Score 295;  DB 1;  Length 136;
  Best Local Similarity   48.0%;  Pred. No. 6.7e-24;
  Matches   59;  Conservative   22;  Mismatches   36;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||| || :|| ||::||| || || : |::||:|:  : |||:| |    | |
Db         20 QVQLQQSGPEVVRPGVSVKISCKGSGYTFTDYAMHWVKQSHAKSLEWIGVISTYNGNTSY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| |:|:  :| |:|: |  |||: | |||:|  ||||      :  :    ||:|| :|
Db         80 NQKFKGKATMTVDKSSSTVHMELARLTSEDSANLYCAR------YYGNYFDYWGQGTTLT 133

Qy        121 VSS 123
              |||
Db        134 VSS 136


RESULT 33
HV16_MOUSE
ID   HV16_MOUSE     STANDARD;      PRT;   136 AA.
AC   P01783;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region MOPC 21 precursor (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=81234548; PubMed=6788376;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Heavy chain variable region contribution to the NPb family of
RT   antibodies: somatic mutation evident in a gamma 2a variable region.";
RL   Cell 24:625-637(1981).
RN   [2]
RP   SEQUENCE OF 17-136.
RX   MEDLINE=77100368; PubMed=401950;
RA   Adetugbo K., Milstein C., Secher D.S.;
RT   "Molecular analysis of spontaneous somatic mutants.";
RL   Nature 265:299-304(1977).
CC   ---------------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; J00522; AAD15290.1; -.
DR   PIR; E90809; G1MS21.
DR   PDB; 1IGC; 03-JUN-95.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
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DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; 3D-structure.
FT   NON_TER       1      1
FT   SIGNAL       <1     16
FT   CHAIN        17    136       IG HEAVY CHAIN V REGION MOPC 21.
FT   DOMAIN      115    119       D SEGMENT.
FT   DOMAIN      120    136       JH4 SEGMENT.
FT   DISULFID     38    112
FT   CONFLICT     75     78       HYAD -> DYAH (IN REF. 2).
FT   CONFLICT     89     90       DN -> ND (IN REF. 2).
FT   CONFLICT    115    115       W -> H (IN REF. 2).
FT   CONFLICT    120    120       Y -> W (IN REF. 2).
FT   NON_TER     136    136
SQ   SEQUENCE   136 AA;  15071 MW;  2276A98DBDBF7016 CRC64;

  Query Match             44.7%;  Score 286.5;  DB 1;  Length 136;
  Best Local Similarity   46.7%;  Pred. No. 5.2e-23;
  Matches   57;  Conservative   25;  Mismatches   37;  Indels    3;  Gaps    1;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||| :||  : :|| | ::|| ||| ||::  ::|||||| :|||:  |     |  |:
Db         18 VQLVESGGGLVQPGGSRKLSCAASGFTFSSFGMHWVRQAPEKGLEWVAYISSGSSTLHYA 77

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTV 121
                :||  |: |    |  ::::|||||||:|||||  :   :|::|:  ||:|| |||
Db         78 DTVKGRFTISRDNPKNTLFLQMTSLRSEDTAMYYCARWGN---YPYYAMDYWGQGTSVTV 134

Qy        122 SS 123
             ||
Db        135 SS 136


RESULT 34
HV3D_HUMAN
ID   HV3D_HUMAN     STANDARD;      PRT;   115 AA.
AC   P01765;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region TIL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=78005528; PubMed=409716;
RA   Wang A.-C., Wang I.Y., Fudenberg H.H.;
RT   "Immunoglobulin structure and genetics. Identity between variable
RT   regions of a mu and a gamma2 chain.";
RL   J. Biol. Chem. 252:7192-7199(1977).
CC   -!- MISCELLANEOUS: THE SEQUENCES OF THE V REGIONS OF THE HEAVY CHAINS
CC       OF IGM AND IGG2 ISOLATED FROM A SINGLE PATIENT WITH BICLONAL
CC       GAMMOPATHY ARE IDENTICAL. THEIR LIGHT CHAINS ARE APPARENTLY ALSO
CC       IDENTICAL.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02048; H3HUTL.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    108       IG-LIKE.
FT   NON_TER     115    115
SQ   SEQUENCE   115 AA;  12356 MW;  4DCC67D179F62326 CRC64;

  Query Match             44.5%;  Score 285;  DB 1;  Length 115;
  Best Local Similarity   45.5%;  Pred. No. 6.1e-23;
  Matches   56;  Conservative   27;  Mismatches   32;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :||  : :|| |:|:|| ||| ||:   ::|||||||:||:|:| |  :  :  |
Db          1 EVQLLESGGGLVQPGGSLRLSCAASGFTFSTYVMSWVRQAPGKGLZWVGAIZGLSVSZSY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :||  |: |:|  |    ::|||:|||||||||: :    :  :    || ||:||
Db         61 ABSVKGRFTISRDDSKNT----MNSLRAEDTAVYYCAKGKVSAYYFBY----WGZGTLVT 112

Qy        121 VSS 123
               |||
Db        113 VSS 115


RESULT 35
HV42_MOUSE
ID   HV42_MOUSE     STANDARD;      PRT;   117 AA.
AC   P01812;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region MOPC 173.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE OF 1-104.
RX   MEDLINE=72105531; PubMed=5062012;
RA   Bourgois A., Fougereau M., de Preval C.;
RT   "Sequence of amino acids of the NH 2 -terminal region of a
RT   mouse-clonal immunoglobulin heavy chain.";
RL   Eur. J. Biochem. 24:446-455(1972).
RN   [2]
RP   SEQUENCE OF 105-117.
RX   MEDLINE=76091933; PubMed=812695;
RA   Rocca-Serra J., Milili M., Fougereau M.;
RT   "Determination of the primary structure of a mouse IgG2a
RT   immunoglobulin. Amino-acid sequence of the H4 cyanogen-bromide
RT   fragment.";
RL   Eur. J. Biochem. 59:511-523(1975).
RN   [3]
RP   SEQUENCE OF 96-117 FROM N.A.
RX   MEDLINE=81223769; PubMed=6787590;
RA   Gough N.M., Bernard O.;
RT   "Sequences of the joining region genes for immunoglobulin heavy
RT   chains and their role in generation of antibody diversity.";
RL   Proc. Natl. Acad. Sci. U.S.A. 78:509-513(1981).
RN   [4]
RP   DISULFIDE BOND.
RA   Bourgois A., Fougereau M.;
RT   "Partial amino acid sequence of the variable region of a mouse
RT   gammaG2a immunoglobulin heavy chain. Evidence for the existence of a
RT   third sub-group of variability for the heavy chain pool.";
RL   FEBS Lett. 8:265-268(1970).
CC   -!- MISCELLANEOUS: THIS GAMMA-2A CHAIN WAS ISOLATED FROM A MYELOMA
CC       PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A91190; G2MS73.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    116       IG-LIKE.
FT   DISULFID     22     96
```

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FT   CONFLICT    105    105       N -> D (IN REF. 2).
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  13051 MW;  156DCCC259380F19 CRC64;

  Query Match             44.3%;  Score 284;  DB 1;  Length 117;
  Best Local Similarity   43.9%;  Pred. No. 7.9e-23;
  Matches   54;  Conservative   31;  Mismatches   32;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|:| :||  : : | |:::|| |||  |:   ::|||||||:||||:| | |   | |
Db          1 EVKLLESGGPLVQLGGSLKLSCAASGFDFSRYWMSWVRQAPGKGLEWIGEIDPNSSTINY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : : :  |: :::  |  :::| :||||||:||||||      |::|:: ||:|| ||
Db         61 TPSLKDKFIISRNDAKNTLYLQMSKVRSEDTALYYCARS------PYYAMNYWGQGTSVT 114

Qy        121 VSS 123
              |||
Db        115 VSS 117


RESULT 36
HV3H_HUMAN
ID   HV3H_HUMAN     STANDARD;      PRT;   122 AA.
AC   P01769;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region GA.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=74175307; PubMed=4208843;
RA   Florent G., Lehman D., Putnam F.W.;
RT   "The switch point in mu heavy chains of human IgM immunoglobulins.";
RL   Biochemistry 13:2482-2498(1974).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A WALDENSTROM'S
CC       MACROGLOBULIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02052; M3HUGA.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     122    122
SQ   SEQUENCE   122 AA;  13166 MW;  74E5B6959E84100A CRC64;

  Query Match             43.3%;  Score 277.5;  DB 1;  Length 122;
  Best Local Similarity   45.5%;  Pred. No. 4e-22;
  Matches   56;  Conservative   26;  Mismatches   40;  Indels    1;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||:| :||    :|| |:|:|| ||| :|:  |::|||||||:||:|:  |         |
Db          1 QVZLVZSGGGAVZPGRSLRLSCAASGFSFSTYAMHWVRQAPGKGLZWLSVISYBGBBZYY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :||  |: ::|  |  :|::|||:|:|||||||||  : |         || ||:||
Db         61 AASVKGRFTISRBBSKBTMYLEMNSLRAENTAVYYCARS-GIALGSVAGTDYWGZGTLVT 119

Qy        121 VSS 123
              :||
Db        120 ISS 122


RESULT 37
HV40_MOUSE
ID   HV40_MOUSE     STANDARD;      PRT;   119 AA.
AC   P01810;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   28-FEB-2003 (Rel. 41, Last annotation update)
DE   Ig heavy chain V region J539.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   PRELIMINARY SEQUENCE.
RX   MEDLINE=79223895; PubMed=111245;
RA   Rao D.N., Rudikoff S., Krutzsch H., Potter M.;
RT   "Structural evidence for independent joining region gene in
RT   immunoglobulin heavy chains from anti-galactan myeloma proteins and
RT   its potential role in generating diversity in
RT   complementarity-determining regions.";
RL   Proc. Natl. Acad. Sci. U.S.A. 76:2890-2894(1979).
RN   [2]
RP   X-RAY CRYSTALLOGRAPHY (2.6 ANGSTROMS).
RX   MEDLINE=88217852; PubMed=3449853;
RA   Suh S.W., Bhat T.N., Navia M.A., Cohen G.H., Rao D.N., Rudikoff S.,
RA   Davies D.R.;
RT   "The galactan-binding immunoglobulin Fab J539: an X-ray diffraction
RT   study at 2.6-A resolution.";
RL   Proteins 1:74-80(1986).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN THAT
CC       BINDS GALACTAN.
DR   PIR; A02080; AVMSJ5.
DR   PDB; 2FBJ; 15-OCT-90.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; 3D-structure.
FT   NON_TER     119    119
FT   STRAND        3      7
FT   STRAND       10     12
FT   TURN         14     15
FT   STRAND       18     25
FT   HELIX        29     31
FT   STRAND       34     39
FT   TURN         41     42
FT   STRAND       45     51
FT   TURN         53     54
FT   STRAND       58     60
FT   TURN         62     67
FT   STRAND       68     72
FT   STRAND       78     83
FT   HELIX        88     90
FT   STRAND       92    100
FT   TURN        101    103
FT   STRAND      104    108
FT   STRAND      112    116
SQ   SEQUENCE   119 AA;  13240 MW;  577B4F1DB675C1F1 CRC64;

  Query Match             43.0%;  Score 275.5;  DB 1;  Length 119;
  Best Local Similarity   43.9%;  Pred. No. 6.2e-22;
  Matches   54;  Conservative   31;  Mismatches   33;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|:| :||  : :|| |:::|| |||  |:   ::|||||||:||||:| | |   || |
Db          1 EVKLLESGGGLVQPGGSLKLSCAASGFDFSKYWMSWVRQAPGKGLEWIGEIHPDSGTINY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
```

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                : : : :  |: | :  :  :::| :|||||:|||||   |  : ::|   ||:||:||
Db         61 TPSLKDKFIISRDNAKNSLYLQMSKVRSEDTALYYCAR---LHYYGYNAY--WGQGTLVT 115

Qy        121 VSS 123
              ||:
Db        116 VSA 118


RESULT 38
HV3F_HUMAN
ID   HV3F_HUMAN     STANDARD;      PRT;   115 AA.
AC   P01767;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region BUT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
     NCBI_TaxID=9606;
     [1]
RP   SEQUENCE.
RX   MEDLINE=78137069; PubMed=416441;
RA   Torano A., Putnam F.W.;
RT   "Complete amino acid sequence of the alpha 2 heavy chain of a human
RT   IgA2 immunoglobulin of the A2m (2) allotype.";
RL   Proc. Natl. Acad. Sci. U.S.A. 75:966-969(1978).
CC   -!- MISCELLANEOUS: THE SEQUENCE OF THE ALPHA-2, A2M(2) ALLOTYPE, C
CC       REGION OF THIS MYELOMA PROTEIN IS ALSO GIVEN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02050; A2HUBU.
DR   HSSP; P01789; 1MCP.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    111       IG-LIKE.
FT   NON_TER     115    115
SQ   SEQUENCE   115 AA;  12379 MW;  208876A7DF52DCF4 CRC64;

  Query Match             42.9%;  Score 275;  DB 1;  Length 115;
  Best Local Similarity   46.3%;  Pred. No. 6.8e-22;
  Matches   57;  Conservative   27;  Mismatches   31;  Indels    8;  Gaps    3;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| ::|  : :|| |:|:|| ||| | ::::::|||||||: |:|:  |    ||  |
Db          1 EVQLVETGGGLIQPGGSLRLSCAASGFTVSBHSMSWVRQAPGKALZWVSAIY-RGGTTYY 59

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :||  |: |:|  |  ::: |||:|||||||||  |||      |   :|:|| ||
Db         60 ADSVKGRFTISRDDSRBTVYLQMBSLRAEDTAVYYCA--RDLA-----AARLFGKGTTVT 112

Qy        121 VSS 123
              |||
Db        113 VSS 115


RESULT 39
HV02_CANFA
ID   HV02_CANFA     STANDARD;      PRT;   117 AA.
AC   P01785;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region MOO.
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   SEQUENCE OF 1-112.
RX   MEDLINE=77242268; PubMed=407924;
RA   Wasserman R.L., Capra J.D.;
RT   "Primary structure of the variable regions of two canine
RT   immunoglobulin heavy chains.";
RL   Biochemistry 16:3160-3168(1977).
RN   [2]
RP   SEQUENCE OF 113-117.
RX   MEDLINE=80077682; PubMed=117299;
RA   McCumber L.J., Capra J.D.;
RT   "The complete amino-acid sequence of a canine mu chain.";
RL   Mol. Immunol. 16:565-570(1979).
CC   -!- MISCELLANEOUS: THIS MU CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A90403; MHDGMO.
DR   HSSP; P01772; 2FB4.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    116       IG-LIKE.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12703 MW;  FCE07309E0A84B35 CRC64;

  Query Match             42.4%;  Score 272;  DB 1;  Length 117;
  Best Local Similarity   44.7%;  Pred. No. 1.4e-21;
  Matches   55;  Conservative   28;  Mismatches   34;  Indels    6;  Gaps    3;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|:| :|| :: ||| |:|:|| ||| ||::| ::|||| ||:||:|:   |   |   |
Db          1 EVKLVESGGDLVKPGGSLRLSCVASGFTFSSNGMSWVRQDPGEGLQWVAD-ISSSGQTYY 59

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :   :|| :|: | :  |  :::  || |||||||||   |: : | :    :|:||:||
Db         60 ADAVKGRFSISRDNAKNTLYLQMEDLRVEDTAVYYCATEGDIEI-PRY----FGQGTIVT 114

Qy        121 VSS 123
              |||
Db        115 VSS 117


RESULT 40
HV37_MOUSE
ID   HV37_MOUSE     STANDARD;      PRT;   119 AA.
AC   P01807;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region X44.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=79223895; PubMed=111245;
RA   Rao D.N., Rudikoff S., Krutzsch H., Potter M.;
RT   "Structural evidence for independent joining region gene in
RT   immunoglobulin heavy chains from anti-galactan myeloma proteins and
RT   its potential role in generating diversity in
RT   complementarity-determining regions.";
RL   Proc. Natl. Acad. Sci. U.S.A. 76:2890-2894(1979).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGA MYELOMA PROTEIN
CC       THAT BINDS GALACTAN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02077; AVMSX4.
DR   HSSP; P01810; 2FBJ.
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DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    117       IG-LIKE.
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  13246 MW;  BC34FC8F31CD41B3 CRC64;

  Query Match             42.4%;  Score 271.5;  DB 1;  Length 119;
  Best Local Similarity   43.1%;  Pred. No. 1.6e-21;
  Matches   53;  Conservative   29;  Mismatches   36;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|:| :||  : :|| |:::|| |||  |:   ::|||||||:||||:| | |    | |
Db          1 EVKLLESGGGLVQPGGSLKLSCAASGFDFSRYWMSWVRQAPGKGLEWIGEINPDSSTINY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : : :  |: | :  |  :::| :||||||:|||||     |  :   : ||:||:||
Db         61 TPSLKDKFIISRDNAKNTLYLQMSKVRSEDTALYYCAR-----LHYYGYAAYWGQGTLVT 115

Qy        121 VSS 123
              ||:
Db        116 VSA 118


RESULT 41
HV38_MOUSE
ID   HV38_MOUSE     STANDARD;      PRT;   119 AA.
AC   P01808;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region T601.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=79223895; PubMed=111245;
RA   Rao D.N., Rudikoff S., Krutzsch H., Potter M.;
RT   "Structural evidence for independent joining region gene in
RT   immunoglobulin heavy chains from anti-galactan myeloma proteins and
RT   its potential role in generating diversity in
RT   complementarity-determining regions.";
RL   Proc. Natl. Acad. Sci. U.S.A. 76:2890-2894(1979).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGA MYELOMA PROTEIN
CC       THAT BINDS GALACTAN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02078; AVMST6.
DR   HSSP; P01810; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    112       IG-LIKE.
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  13169 MW;  BC38CC84E6EA00E8 CRC64;

  Query Match             41.9%;  Score 268.5;  DB 1;  Length 119;
  Best Local Similarity   43.9%;  Pred. No. 3.4e-21;
  Matches   54;  Conservative   25;  Mismatches   39;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :|:| :||  : :|| |:::|| |||  |:   ::|||||||:||||:| | |    | |
Db          1 EVKLLESGGGLVQPGGSLKLSCAASGFDFSRYWMSWVRQAPGKGLEWIGEINPDSSTINY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : : :  |: | :  |  :::| :||||||:|||||     |  :   : ||:||:||
Db         61 TPSLKDKFIISRDNAKNTLYLQMSKVRSEDTALYYCAR-----LGYYGYFDVWGAGTTVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 42
HV3P_HUMAN
ID   HV3P_HUMAN     STANDARD;      PRT;   119 AA.
AC   P01777;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region TEI.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=74142702; PubMed=4522793;
RA   Capra J.D., Kehoe J.M.;
RT   "Variable region sequences of five human immunoglobulin heavy chains
RT   of the VH3 subgroup: definitive identification of four heavy chain
RT   hypervariable regions.";
RL   Proc. Natl. Acad. Sci. U.S.A. 71:845-848(1974).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGG1 MYELOMA
CC       PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02060; G1HUTE.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    107       IG-LIKE.
FT   NON_TER     119    119
SQ   SEQUENCE   119 AA;  12802 MW;  7E24DC852C7290A9 CRC64;

  Query Match             41.6%;  Score 266.5;  DB 1;  Length 119;
  Best Local Similarity   43.9%;  Pred. No. 5.4e-21;
  Matches   54;  Conservative   25;  Mismatches   37;  Indels    7;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :||  : :|| |:|:|| ||| ||: :|: |||||||:||||:|          |
Db          1 EVQLVESGGGLVQPGGSLRLSCAASGFTFSTSAVYWVRQAPGKGLEWVGWRYEGSSLTHY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR---SRDLLLFPHHALSPWGRGT 117
              : : |||  |: ::|  |  ::: ||  ::|||||||   :  | |     : ||:||
Db         61 AVSVQGRFTISRNDSKNTLYLQMLSLEPZBTAVYYCARVTPAAASLTFS----AVWGQGT 116

Qy        118 MVT 120
              :||
Db        117 LVT 119


RESULT 43
HV3A_HUMAN
ID   HV3A_HUMAN     STANDARD;      PRT;   122 AA.
AC   P01762;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region TRO.
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OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE (MYELOMA PROTEIN TRO).
RX   MEDLINE=76023781; PubMed=809331;
RA   Kratzin H., Altevogt P., Ruban E., Kortt A., Staroscik K.,
RA   Hilschmann N.;
RT   "The primary structure of a monoclonal IgA-immunoglobulin (IgA Tro.),
RT   II. The amino acid sequence of the H-chain, alpha-type, subgroup III;
RT   structure of the complete IgA-molecule.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 356:1337-1342(1975).
CC   -!- MISCELLANEOUS: THE SEQUENCE OF THE C REGION IS ALSO GIVEN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02045; A1HUTR.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    108       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     122    122
SQ   SEQUENCE   122 AA;  13472 MW;  2E21A11DA04D80F9 CRC64;

  Query Match             41.6%;  Score 266.5;  DB 1;  Length 122;
  Best Local Similarity   41.5%;  Pred. No. 5.6e-21;
  Matches   51;  Conservative   29;  Mismatches   42;  Indels    1;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||  : ||| |:|:|| ||| :| :  ::|:|: ||:||:|:  |     |  |
Db          1 QVQLVQSGGGLVKPGGSLRLSCVASGFSFRDFYMSWIRZTPGKGLZWVSYIGGSGSTLYY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :||  |: | :  :  ::: |||:::|||||| : :   :   :|  || | :||
Db         61 ADSVKGRFTISRDNAQKSLYLZMBSLRTZBTAVYYCAATBB-FBWSTFSLBYWGZGBLVT 119

Qy        121 VSS 123
             |||
Db        120 VSS 122


RESULT 44
HV3C_HUMAN
ID   HV3C_HUMAN     STANDARD;      PRT;   117 AA.
AC   P01764;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region VH26 precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=81101090; PubMed=6450418;
RA   Matthyssens G., Rabbitts T.H.;
RT   "Structure and multiplicity of genes for the human immunoglobulin
RT   heavy chain variable region.";
RL   Proc. Natl. Acad. Sci. U.S.A. 77:6561-6565(1980).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; J00236; AAA53516.1; -.
DR   EMBL; M35415; AAA58735.1; -.
DR   PIR; A02047; H3HU26.
DR   PDB; 1HOU; 23-DEC-99.
DR   Genew; HGNC:5545; IGHV@.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; 3D-structure.
FT   SIGNAL        1     19
FT   CHAIN        20    117       IG HEAVY CHAIN V-III REGION VH26.
FT   DOMAIN       20   >117       IG-LIKE.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12582 MW;  E826733F1A3CB0F1 CRC64;

  Query Match             41.3%;  Score 265;  DB 1;  Length 117;
  Best Local Similarity   50.0%;  Pred. No. 7.6e-21;
  Matches   49;  Conservative   22;  Mismatches   27;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :||  : :|| |:|:|| ||| ||:: |::|||||||:||||:  |    |:  |
Db         20 EVQLLESGGGLVQPGGSLRLSCAASGFTFSSYAMSWVRQAPGKGLEWVSAISGSGGSTYY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
                : :||  |: | |  |  ::::|||:|||||||||:
Db         80 GDSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVYYCAK 117


RESULT 45
HV3T_HUMAN
ID   HV3T_HUMAN     STANDARD;      PRT;   116 AA.
AC   P01781;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region GAL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=75059123; PubMed=4803843;
RA   Watanabe S., Barnikol H.U., Horn J., Bertram J., Hilschmann N.;
RT   "The primary structure of a monoclonal IgM-immunoglobulin
RT   (macroglobulin Gal.), II: the amino acid sequence of the H-chain (mu-
RT   type), subgroup H III. Architecture of the complete IgM-molecule.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 354:1505-1509(1973).
RN   [2]
RP   REVISION TO 28-33.
RA   Hilschmann N.;
RL   Submitted (JUN-1975) to the PIR data bank.
CC   -!- MISCELLANEOUS: THIS MU CHAIN WAS ISOLATED FROM A WALDENSTROM'S
CC       MACROGLOBULIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02064; M3HUGL.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
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DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    112       IG-LIKE.
FT   NON_TER     116    116
SQ   SEQUENCE   116 AA;  12730 MW;  2C67CA9AAAAA1282 CRC64;

  Query Match             41.3%;  Score 264.5;  DB 1;  Length 116;
  Best Local Similarity   42.1%;  Pred. No. 8.5e-21;
  Matches   53;  Conservative   25;  Mismatches   35;  Indels   13;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :|| :: :|| |:|:|| |||  |::  : |||||||:||||:  |        |
Db          1 EVQLVESGGDLVQPGRSLRLSCAASGFBFBBLGMTWVRQAPGKGLEWVANIKZBGSZZBY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR---SRDLLLFPHHALSPWGRGT 117
                : :||  |: | :  :  ::::||| ||||:|||||     |           ||:||
Db         61 VDSVKGRFTISRDNAKNSLYLQMNSLRVEDTALYYCARGWGGGDY----------WGQGT 110

Qy        118 MVTVSS 123
              :||||:
Db        111 LVTVST 116


RESULT 46
HV3K_HUMAN
ID   HV3K_HUMAN     STANDARD;      PRT;   126 AA.
AC   P01772;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region KOL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE, AND DISULFIDE BONDS.
RX   MEDLINE=83289131; PubMed=6884994;
RA   Schmidt W.E., Jung H.-D., Palm W., Hilschmann N.;
RT   "Three-dimensional structure determination of antibodies. Primary
RT   structure of crystallized monoclonal immunoglobulin IgG1 KOL, I.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 364:713-747(1983).
RN   [2]
RP   X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS).
RX   MEDLINE=81072295; PubMed=7441755;
RA   Marquart M., Deisenhofer J., Huber R., Palm W.;
RT   "Crystallographic refinement and atomic models of the intact
RT   immunoglobulin molecule Kol and its antigen-binding fragment at 3.0 A
RT   and 1.0-A resolution.";
RL   J. Mol. Biol. 141:369-391(1980).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02055; G1HUKL.
DR   PDB; 2FB4; 12-JUL-89.
DR   PDB; 2IG2; 12-JUL-89.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; 3D-structure; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    112       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     96
FT   DISULFID    105    110
FT   STRAND        3      7
FT   STRAND       11     12
FT   TURN         14     15
FT   STRAND       18     25
FT   HELIX        29     31
FT   STRAND       34     39
FT   TURN         41     42
FT   STRAND       45     51
FT   TURN         53     54
FT   STRAND       58     60
FT   HELIX        62     64
FT   STRAND       65     65
FT   TURN         66     67
FT   STRAND       68     73
FT   TURN         74     77
FT   STRAND       78     83
FT   HELIX        88     90
FT   STRAND       92     99
FT   STRAND      106    106
FT   TURN        107    108
FT   STRAND      109    109
FT   STRAND      113    116
FT   STRAND      120    124
FT   NON_TER     126    126
SQ   SEQUENCE   126 AA;  13718 MW;  E4D71B52B16F8776 CRC64;

  Query Match             41.1%;  Score 263.5;  DB 1;  Length 126;
  Best Local Similarity   44.6%;  Pred. No. 1.2e-20;
  Matches   58;  Conservative   20;  Mismatches   41;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| :||  | :|| |:|:|| :||  |:: |: |||||||:||||:  |        |
Db          1 QVQLVESGGGVVQPGRSLRLSCSSSGFIFSSYAMYWVRQAPGKGLEWVAIIWDDGSDQHY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-------SRDLLLFPHHALSPW 113
              : : :||  |: | |  |  ::: ||| ||| ||:|||       |      | :    |
Db         61 ADSVKGRFTISRDNSKNTLFLQMDSLRPEDTGVYFCARDGGHGFCSSASCFGPDY----W 116

Qy        114 GRGTMVTVSS 123
              |:|| |||||
Db        117 GQGTPVTVSS 126


RESULT 47
HV3U_HUMAN
ID   HV3U_HUMAN     STANDARD;      PRT;   120 AA.
AC   P01782;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region DOB.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80020921; PubMed=114209;
RA   Steiner L.A., Garcia Pardo A., Margolies M.N.;
RT   "Amino acid sequence of the heavy-chain variable region of the
RT   crystallizable human myeloma protein Dob.";
RL   Biochemistry 18:4068-4080(1979).
RN   [2]
RP   CRYSTALLIZATION.
RX   MEDLINE=80020920; PubMed=114208;
RA   Steiner L.A., Lopes A.D.;
RT   "The crystallizable human myeloma protein Dob has a hinge-region
RT   deletion.";
RL   Biochemistry 18:4054-4067(1979).
CC   -!- MISCELLANEOUS: THIS GAMMA-1 MYELOMA PROTEIN HAS A DELETION IN THE
CC       HINGE REGION. THERE ARE NO LIGHT-HEAVY OR INTER-HEAVY CHAIN
CC       DISULFIDE BONDS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A90431; G1HUDB.
DR   HSSP; P01772; 2FB4.
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DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    112       IG-LIKE.
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13440 MW;  880DDE307C4B2627 CRC64;

  Query Match             41.0%;  Score 262.5;  DB 1;  Length 120;
  Best Local Similarity   42.3%;  Pred. No. 1.4e-20;
  Matches   52;  Conservative   28;  Mismatches   40;  Indels    3;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :||| :|| :: :|| |:|:|| |||  |:   ::|:|| ||:| ||:  |    |:  |
Db          1 EVQLVESGGDLVQPGRSLRLSCAASGFNFHEYNMHWLRQGPGKGPEWVSTITWNGGSVLY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              : : :|| ||: | :  |  ::|: || |||| ||||:     ::  :    ||:||:||
Db         61 ADSVKGRFAISRDNAQKTLYLQLNILRPEDTAFYYCAKG---YIWNGNWFDSWGQGTLVT 117

Qy        121 VSS 123
             |||
Db        118 VSS 120


RESULT 48
HV3E_HUMAN
ID   HV3E_HUMAN     STANDARD;      PRT;   120 AA.
AC   P01766;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V-III region BRO.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=77117674; PubMed=65324;
RA   Capra J.D., Hopper J.E.;
RT   "Comparative studies on monotypic IgM lambda and IgG kappa from an
RT   individual patient. III. The complete amino acid sequence of the VH
RT   region of the IgM paraprotein.";
RL   Immunochemistry 13:995-999(1976).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS OBTAINED FROM IGM ISOLATED FROM THE
CC       SERUM OF A PATIENT WITH MALIGNANT LYMPHOMA OF THE WALDENSTROM
CC       TYPE.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02049; M3HUBW.
DR   HSSP; P01772; 2FB4.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    111       IG-LIKE.
FT   NON_TER     120    120
SQ   SEQUENCE   120 AA;  13227 MW;  D3F0428F7C2E6410 CRC64;

  Query Match             40.7%;  Score 261;  DB 1;  Length 120;
  Best Local Similarity   45.6%;  Pred. No. 2.1e-20;
  Matches   57;  Conservative   25;  Mismatches   31;  Indels   12;  Gaps    4;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTA-- 58
              :||| :||  : :|| |:|:|| ||| ||:   :|||||  |:||||:  |    |||
Db          1 EVQLVESGGGLVQPGGSLRLSCAASGFTFSYYNMNWVRQVTGKGLEWVSAI----GTAGD 56

Qy         59 -KYSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSR----DLLLFPHHALSPW 113
               |: : :||  |: ::|  |  : ::|||:||||||||||     |  |: ::  | |
Db         57 QYYADSVKGRFTISRNDSKNTLYLNMNSLRAEDTAVYYCARSPVSLVDGWLYYYYG-SVW 115

Qy        114 GRGTM 118
              |:||:
Db        116 GQGTL 120


RESULT 49
HV22_MOUSE
ID   HV22_MOUSE     STANDARD;      PRT;   123 AA.
AC   P01791;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region HPCM6.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=81197602; PubMed=7231520;
RA   Gearhart P.J., Johnson N.D., Douglas R., Hood L.;
RT   "IgG antibodies to phosphorylcholine exhibit more diversity than
RT   their IgM counterparts.";
RL   Nature 291:29-34(1981).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN THAT
CC       BINDS PHOSPHORYLCHOLINE.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; D93256; AVMSH6.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Hybridoma.
FT   DOMAIN        1    114       IG-LIKE.
FT   NON_TER     123    123
SQ   SEQUENCE   123 AA;  13895 MW;  81361892ECBF7000 CRC64;

  Query Match             40.7%;  Score 261;  DB 1;  Length 123;
  Best Local Similarity   42.4%;  Pred. No. 2.1e-20;
  Matches   53;  Conservative   25;  Mismatches   43;  Indels    4;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFG--TA 58
              :|:| :||  : :|| |:|:||  || ||::  : |||| ||: |||:          |
Db          1 EVKLVESGGGLVQPGGSLRLSCATSGFTFSDFYMEWVRQPPGKRLEWIAASRNKANDYTT 60

Qy         59 KYSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTM 118
              :|| : :||  :: | |     :::::||:||||:||||  ||   :||     || ||
Db         61 EYSASVKGRFIVSRDTSQSILYLQMNALRAEDTAIYYCA--RDYYDYPHWYFDVWGAGTT 118

Qy        119 VTVSS 123
              |||||
Db        119 VTVSS 123


RESULT 50
HV01_RAT
ID   HV01_RAT       STANDARD;      PRT;   142 AA.
AC   P01805;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
```

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DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig heavy chain V region IR2 precursor.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83064537; PubMed=6292865;
RA   Hellman L., Pettersson U., Engstroem A., Karlsson T., Bennich H.;
RT   "Structure and evolution of the heavy chain from rat immunoglobulin
RT   E.";
RL   Nucleic Acids Res. 10:6041-6049(1982).
CC   -!- MISCELLANEOUS: THE MRNA WAS ISOLATED FROM AN IGE-SECRETING
CC       IMMUNOCYTOMA THAT ARISES SPONTANEOUSLY IN LOU/C/WSL RATS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A02075; EVRTR2.
DR   HSSP; P01789; 1MCP.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    142       IG HEAVY CHAIN V REGION IR2.
FT   DOMAIN       20    133       IG-LIKE.
FT   NON_TER     142    142
SQ   SEQUENCE   142 AA;  16024 MW;  DE29E6CFE745DF3B CRC64;

  Query Match             40.4%;  Score 259;  DB 1;  Length 142;
  Best Local Similarity   39.2%;  Pred. No. 4e-20;
  Matches   51;  Conservative   32;  Mismatches   33;  Indels   14;  Gaps    3;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFG--TA 58
              :|:|::||  : :|| ||::||  || ||::  : |||||||:||||:  |        |
Db         20 EVKLEESGGGLVQPGMSVKLSCATSGFTFSDYWMEWVRQAPGKGLEWVAEIRNKANNYVA 79

Qy         59 KYSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-----SRDLLLFPHHALSPW 113
               | :: :||  :: |:|     ::::::|||||| :|||:|     | :  ::       |
Db         80 YYGKSLKGRFTLSRDDSKSIVYLQMNNIRSEDTGIYYCSRGYGGYSENWFVY-------W 132

Qy        114 GRGTMVTVSS 123
              |:||:|||||
Db        133 GQGTLVTVSS 142


Search completed: November 26, 2003, 13:39:47
Job time : 11.5128 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:36:45 ; Search time 14.1923 Seconds
(without alignments)
833.462 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283308 seqs, 96168682 residues

Total number of hits satisfying chosen parameters: 283308

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	482.5	75.3	116	2	PH0959	Ig heavy chain V r
2	481	75.0	135	2	PH0953	Ig heavy chain V r
3	480	74.9	119	2	PH0961	Ig heavy chain V r
4	478.5	74.6	122	2	PH0958	Ig heavy chain V r
5	478	74.6	125	2	PH0957	Ig heavy chain V r
6	476.5	74.3	132	2	S46394	Ig heavy chain V r
7	476	74.3	129	2	A33548	Ig heavy chain V-1
8	475	74.1	127	2	PH0955	Ig heavy chain V r
9	474.5	74.0	120	2	PH0962	Ig heavy chain V r
10	474.5	74.0	132	2	PH0954	Ig heavy chain V r
11	472.5	73.7	128	2	PH0952	Ig heavy chain V r
12	472	73.6	133	2	C33548	Ig heavy chain V-1
13	472	73.6	627	2	S14683	Ig mu chain precur
14	471.5	73.6	126	2	B33548	Ig heavy chain V-1
15	471.5	73.6	136	2	PH0960	Ig heavy chain V r
16	465	72.5	122	2	B49590	Ig heavy chain V r
17	445.5	69.5	116	2	S36261	Ig heavy chain V r
18	440	68.6	98	2	S26915	Ig heavy chain V r
19	440	68.6	113	2	PH1663	Ig heavy chain V r
20	440	68.6	116	2	S31698	Ig heavy chain pre
21	440	68.6	123	2	S44108	Ig heavy chain V-D
22	436.5	68.1	135	2	B32274	Ig heavy chain pre
23	436	68.0	98	2	S24680	Ig heavy chain V1
24	434.5	67.8	108	2	PH1664	Ig heavy chain V r
25	431.5	67.3	119	2	S44106	Ig heavy chain V-D
26	421	65.7	117	1	G1HUEU	Ig heavy chain V-I
27	415	64.7	98	2	A30523	Ig heavy chain V-I
28	414	64.6	121	2	A49590	Ig heavy chain V r
29	412	64.3	98	2	S46463	Ig heavy chain V1
30	410	64.0	109	2	PH1671	Ig heavy chain V r
31	410	64.0	122	2	C49590	Ig heavy chain V r
32	407	63.5	116	2	S31667	Ig heavy chain V r
33	404	63.0	97	2	PH0870	Ig heavy chain V r
34	402.5	62.8	118	2	S36265	Ig heavy chain V r
35	401.5	62.6	124	2	S19665	Ig heavy chain V r
36	400.5	62.5	136	2	S31600	Ig heavy chain V r
37	397	61.9	142	2	A32483	Ig heavy chain V r
38	396	61.8	129	2	S36260	Ig heavy chain V r
39	394.5	61.5	119	2	F49590	Ig heavy chain V r
40	392.5	61.2	135	2	S49530	anti-Sm antibody V
41	387	60.4	123	2	D33548	Ig heavy chain V-1
42	382	59.6	121	2	S20783	Ig heavy chain V r
43	382	59.6	127	2	S34014	Ig heavy chain V r
44	380	59.3	148	2	S29257	Ig heavy chain V r
45	374.5	58.4	114	2	PH1667	Ig heavy chain V r

ALIGNMENTS

RESULT 1
PH0959
Ig heavy chain V region (G6+ T-L26) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0959
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0959
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-116 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-104/Region: complementarity-determining 3

Query Match 75.3%; Score 482.5; DB 2; Length 116;
Best Local Similarity 77.2%; Pred. No. 2e-37;
Matches 95; Conservative 9; Mismatches 12; Indels 7; Gaps 1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
                :| ||||| ||||||| || |||||||||||||||||||         :   |||:||:||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARG-------DNWFDPWGQGTLVT 113

Qy        121 VSS 123
                |||
Db        114 VSS 116
```

RESULT 2
PH0953
Ig heavy chain V region (G6+ CLL-SIC) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0953
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0953

```
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-135 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-123/Region: complementarity-determining 3

  Query Match             75.0%;  Score 481;  DB 2;  Length 135;
  Best Local Similarity   74.8%;  Pred. No. 3.2e-37;
  Matches  101;  Conservative    6;  Mismatches   16;  Indels   12;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR---------SRDLLL---FPHH 108
              :| ||||| ||||||| || ||||||||||||||||          ||  ||   |
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARNGYCGGDCYSRWELLRFDFSED 120

Qy        109 ALSPWGRGTMVTVSS 123
              |  || ||||||||
Db        121 AFDIWGPGTMVTVSS 135


RESULT 3
PH0961
Ig heavy chain V region (G6+ T-L33) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0961
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0961
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-119 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-107/Region: complementarity-determining 3

  Query Match             74.9%;  Score 480;  DB 2;  Length 119;
  Best Local Similarity   76.4%;  Pred. No. 3.5e-37;
  Matches   94;  Conservative   11;  Mismatches   14;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| ||||||| || ||||||||||||||||||      : :: :  ||:|| ||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARG----YYYYYGMDVWGQGTTVT 116

Qy        121 VSS 123
              |||
Db        117 VSS 119


RESULT 4
PH0958
Ig heavy chain V region (G6+ CLL-HUR) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0958
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0958
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-122 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-110/Region: complementarity-determining 3

  Query Match             74.6%;  Score 478.5;  DB 2;  Length 122;
  Best Local Similarity   78.0%;  Pred. No. 4.9e-37;
  Matches   96;  Conservative    9;  Mismatches   17;  Indels    1;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| ||||||| || ||||||||||||||||||  : | |    :  ||:|| ||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARVPNPLFFA-VGMDVWGQGTTVT 119

Qy        121 VSS 123
              |||
Db        120 VSS 122


RESULT 5
PH0957
Ig heavy chain V region (G6+ CLL-BRA) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0957
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0957
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-125 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-113/Region: complementarity-determining 3

  Query Match             74.6%;  Score 478;  DB 2;  Length 125;
  Best Local Similarity   77.8%;  Pred. No. 5.6e-37;
  Matches   98;  Conservative    7;  Mismatches   17;  Indels    4;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: |||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAINWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR---SRDLLLFPHHALSPWGRGT 117
              :| ||||| ||||||| || |||||||||||||||||   |     |      |||:||
```

```
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAVYYCARDGCSGGSCYF-WGWFDPWGQGT 119

Qy        118 MVTVSS 123
              :|||||
Db        120 LVTVSS 125


RESULT 6
S46394
Ig heavy chain V region - human
C;Species: Homo sapiens (man)
C;Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 20-Jun-2000
C;Accession: S46394
R;Figini, M.; Marks, J.D.; Winter, G.; Griffiths, A.D.
J. Mol. Biol. 239, 68-78, 1994
A;Title: In vitro assembly of repertoires of antibody chains on the surface of phage by
A;Reference number: S46390; MUID:94254092; PMID:8196048
A;Accession: S46394
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-132 <FIG>
A;Cross-references: EMBL:Z31681; NID:g509788; PIDN:CAA83486.1; PID:g1335147
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             74.3%;  Score 476.5;  DB 2;  Length 132;
  Best Local Similarity   72.0%;  Pred. No. 8.1e-37;
  Matches   95;  Conservative   14;  Mismatches   14;  Indels    9;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| :
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANH 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSR---------DLLLFPHHALS 111
              :| ||||| ||||||| || |||||||||||||||||::         : |   :: :
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARTQLPAADTGILEWLPSYYYYMD 120

Qy        112 PWGRGTMVTVSS 123
              ||:||||||||
Db        121 VWGKGTMVTVSS 132


RESULT 7
A33548
Ig heavy chain V-1 region (NEI) - human
C;Species: Homo sapiens (man)
C;Date: 17-Jan-1990 #sequence_revision 17-Jan-1990 #text_change 16-Aug-1996
C;Accession: A33548; PH0956
R;Kipps, T.J.; Tomhave, E.; Pratt, L.F.; Duffy, S.; Chen, P.P.; Carson, D.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 5913-5917, 1989
A;Title: Developmentally restricted immunoglobulin heavy chain variable region gene expr
A;Reference number: A33548; MUID:89345575; PMID:2503826
A;Accession: A33548
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-129 <KIP>
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0956
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-129 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-117/Region: complementarity-determining 3

  Query Match             74.3%;  Score 476;  DB 2;  Length 129;
  Best Local Similarity   76.7%;  Pred. No. 8.8e-37;
  Matches   99;  Conservative    8;  Mismatches   16;  Indels    6;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLL---LFPHHALSP---WG 114
              :| ||||| ||||||| || |||||||||||||||||    ||    |      ||    ||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARGPRLLADVLLWFGELSEFDYWG 120

Qy        115 RGTMVTVSS 123
              :||:|||||
Db        121 QGTLVTVSS 129


RESULT 8
PH0955
Ig heavy chain V region (G6+ CLL-AND) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0955
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0955
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-127 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-115/Region: complementarity-determining 3

  Query Match             74.1%;  Score 475;  DB 2;  Length 127;
  Best Local Similarity   74.8%;  Pred. No. 1.1e-36;
  Matches   95;  Conservative   10;  Mismatches   18;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPH----HALSPWGRG 116
              :| ||||| ||||||| || |||||||||||||||||     :  |    : :  ||:|
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARVSIFGVVQHYYYYYYMDVWGKG 120

Qy        117 TMVTVSS 123
              | |||||
Db        121 TTVTVSS 127


RESULT 9
PH0962
Ig heavy chain V region (G6+ T-L42) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0962
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0962
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
```

```
A;Residues: 1-120 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-108/Region: complementarity-determining 3

  Query Match             74.0%;  Score 474.5;  DB 2;  Length 120;
  Best Local Similarity   78.0%;  Pred. No. 1.1e-36;
  Matches   96;  Conservative    9;  Mismatches   15;  Indels    3;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| ||||||| || |||||||||||||||||   :   ||     ||:||:||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARG-GVAGRPH--FDYWGQGTLVT 117

Qy        121 VSS 123
              |||
Db        118 VSS 120


RESULT 10
PH0954
Ig heavy chain V region (G6+ CLL-HEN) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0954
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0954
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-132 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-120/Region: complementarity-determining 3

  Query Match             74.0%;  Score 474.5;  DB 2;  Length 132;
  Best Local Similarity   72.0%;  Pred. No. 1.2e-36;
  Matches   95;  Conservative   12;  Mismatches   16;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLL------LFP---HHALS 111
              :| ||||| ||||||| || |||||||||||||||||    :       :|   :: :
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARPHASIDDFWSGYYPNYYYYGMD 120

Qy        112 PWGRGTMVTVSS 123
               ||:|| |||||
Db        121 VWGQGTTVTVSS 132


RESULT 11
PH0952
Ig heavy chain V region (G6+ CLL-SMI) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0952
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0952
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-128 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-116/Region: complementarity-determining 3

  Query Match             73.7%;  Score 472.5;  DB 2;  Length 128;
  Best Local Similarity   71.9%;  Pred. No. 1.8e-36;
  Matches   97;  Conservative    8;  Mismatches   11;  Indels   19;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA------------RSRDLLLFPHH 108
              :| ||||| ||||:|| || |||||||||||||||||            || |
Db         61 AQKFQGRVTITADKSTSTAYMELSSLRSEDTAVYYCARGGNYDYIWGSYRSND------- 113

Qy        109 ALSPWGRGTMVTVSS 123
              |   ||:||||||||
Db        114 AFDIWGQGTMVTVSS 128


RESULT 12
C33548
Ig heavy chain V-1 region (783) - human
C;Species: Homo sapiens (man)
C;Date: 17-Jan-1990 #sequence_revision 17-Jan-1990 #text_change 16-Aug-1996
C;Accession: C33548
R;Kipps, T.J.; Tomhave, E.; Pratt, L.F.; Duffy, S.; Chen, P.P.; Carson, D.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 5913-5917, 1989
A;Title: Developmentally restricted immunoglobulin heavy chain variable region gene expr
A;Reference number: A33548; MUID:89345575; PMID:2503826
A;Accession: C33548
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
A;Molecule type: DNA
A;Residues: 1-133 <KIP>
A;Experimental source: the sequence was determined from the differentiated gene
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             73.6%;  Score 472;  DB 2;  Length 133;
  Best Local Similarity   70.4%;  Pred. No. 2.1e-36;
  Matches   95;  Conservative   13;  Mismatches   13;  Indels   14;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFP------------HH 108
              :| ||||| ||||||| || |||||||||||||||||::   :| |            ::
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCAKTG--ILGPYSSGWYPNSDYYYY 118

Qy        109 ALSPWGRGTMVTVSS 123
               :  ||:|| |||||
Db        119 GMDVWGQGTTVTVSS 133
```

RESULT 13
S14683
Ig mu chain precursor, membrane-bound (clone 201) - human
C;Species: Homo sapiens (man)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 23-Jul-1999
C;Accession: S14683; S08047
R;Friedlander, R.M.; Nussenzweig, M.C.; Leder, P.
Nucleic Acids Res. 18, 4278, 1990
A;Title: Complete nucleotide sequence of the membrane form of the human IgM heavy chain.
A;Reference number: S14683; MUID:90332450; PMID:2115996
A;Accession: S14683
A;Molecule type: mRNA
A;Residues: 1-627 <FRI>
A;Cross-references: EMBL:X17115; NID:g33450; PIDN:CAA34971.1; PID:g33451
C;Superfamily: immunoglobulin C region; immunoglobulin homology
C;Keywords: immunoglobulin; membrane protein
F;1-15/Domain: signal sequence #status predicted <SIG>
F;16-627/Product: Ig mu chain #status predicted <MAT>
F;34-117/Domain: immunoglobulin homology <IMM>

Query Match 73.6%; Score 472; DB 2; Length 627;
Best Local Similarity 70.4%; Pred. No. 1.1e-35;
Matches 95; Conservative 13; Mismatches 13; Indels 14; Gaps 2;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db         20 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFP-----------HH 108
              :| ||||| ||||||| || ||||||||||||||||::   :| |           ::
Db         80 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCAKTG--ILGPYSSGWYPNSDYYY 137

Qy        109 ALSPWGRGTMVTVSS 123
               :  ||:|| |||||
Db        138 GMDVWGQGTTVTVSS 152
```

RESULT 14
B33548
Ig heavy chain V-1 region (AND) - human
C;Species: Homo sapiens (man)
C;Date: 17-Jan-1990 #sequence_revision 17-Jan-1990 #text_change 16-Aug-1996
C;Accession: B33548
R;Kipps, T.J.; Tomhave, E.; Pratt, L.F.; Duffy, S.; Chen, P.P.; Carson, D.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 5913-5917, 1989
A;Title: Developmentally restricted immunoglobulin heavy chain variable region gene expr
A;Reference number: A33548; MUID:89345575; PMID:2503826
A;Accession: B33548
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
A;Molecule type: DNA
A;Residues: 1-126 <KIP>
A;Experimental source: the sequence was determined from the differentiated gene
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

Query Match 73.6%; Score 471.5; DB 2; Length 126;
Best Local Similarity 75.4%; Pred. No. 2.2e-36;
Matches 95; Conservative 9; Mismatches 19; Indels 3; Gaps 1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPH---HALSPWGRGT 117
              :| ||||| ||||||| || ||||||||||||||||||     :  |   : :  || ||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARVSIFGVVQHYYYYYMDVWGLGT 120

Qy        118 MVTVSS 123
               |||||
Db        121 TVTVSS 126
```

RESULT 15
PH0960
Ig heavy chain V region (G6+ T-L30) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Aug-1996
C;Accession: PH0960
R;Martin, T.; Duffy, S.F.; Carson, D.A.; Kipps, T.J.
J. Exp. Med. 175, 983-991, 1992
A;Title: Evidence for somatic selection of natural autoantibodies.
A;Reference number: PH0952; MUID:92202880; PMID:1552291
A;Accession: PH0960
A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-136 <MAR>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-30/Region: framework 1
F;15-98/Domain: immunoglobulin homology <IMM>
F;31-35/Region: complementarity-determining 1
F;36-50/Region: framework 2
F;51-67/Region: complementarity-determining 2
F;68-98/Region: framework 3
F;99-124/Region: complementarity-determining 3

Query Match 73.6%; Score 471.5; DB 2; Length 136;
Best Local Similarity 69.1%; Pred. No. 2.4e-36;
Matches 94; Conservative 12; Mismatches 17; Indels 13; Gaps 1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLL-------------LFPH 107
              :| ||||| ||||:|| || |||||||||||||||||| |  :             :
Db         61 AQKFQGRVTITADKSTSTAYMELSSLRSEDTAVYYCARGRTRVSVSTLYDSSGYYDFSGY 120

Qy        108 HALSPWGRGTMVTVSS 123
               : :  ||:|| |||||
Db        121 YGMDVWGQGTTVTVSS 136
```

RESULT 16
B49590
Ig heavy chain V region (ACHSV1; clone 18) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 23-May-1997
C;Accession: B49590
R;Burioni, R.; Williamson, R.A.; Sanna, P.P.; Bloom, F.E.; Burton, D.R.
Proc. Natl. Acad. Sci. U.S.A. 91, 355-359, 1994
A;Title: Recombinant human Fab to glycoprotein D neutralizes infectivity and prevents ce
A;Reference number: A49590; MUID:94105168; PMID:8278393
A;Accession: B49590
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Residues: 1-122 <BUR>
A;Experimental source: bone marrow lymphocytes
A;Note: sequence extracted from NCBI backbone (NCBIP:141851)
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;12-95/Domain: immunoglobulin homology <IMM>

Query Match 72.5%; Score 465; DB 2; Length 122;
Best Local Similarity 73.0%; Pred. No. 8.5e-36;
Matches 89; Conservative 15; Mismatches 16; Indels 2; Gaps 1;

```
Qy          4 LQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQN 63
              |::|||||||||||:|||:|||||||| ||:|||||||||||||||| |   ||||:|:
Db          1 LEESGAEVKKPGSSVKVSCRASGGTFNNYAISWVRQAPGQGLEWMGGIFPFRNTAKYAQH 60

Qy         64 FQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDL--LLFPHHALSPWGRGTMVTV 121
              ||||| |||||||||| ||||||||||||:|||||   :  :   ::|:  ||:|| |||
Db         61 FQGRVTITADESTGTAYMELSSLRSEDTAIYYCARGDTIFGVTMGYYAMDVWGQGTTVTV 120
```

```
Qy        122 SS 123
              :|
Db        121 AS 122


RESULT 17
S36261
Ig heavy chain V region (clone alpha-TNF-E7) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
C;Accession: S36261
R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.
EMBO J. 12, 725-734, 1993
A;Title: Human anti-self antibodies with high specificity from phage display libraries.
A;Reference number: S36256; MUID:93178448; PMID:7679990
A;Accession: S36261
A;Status: preliminary; nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-116 <GRI>
A;Cross-references: EMBL:Z18841; NID:g33119; PIDN:CAA79293.1; PID:g939899
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             69.5%;  Score 445.5;  DB 2;  Length 116;
  Best Local Similarity   73.9%;  Pred. No. 4.9e-34;
  Matches   88;  Conservative   12;  Mismatches   12;  Indels    7;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||:|||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLQESGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA----RSRDLLLFPHHALSPWGR 115
              :| ||||| ||||||| || ||||||||||||||||    | |   : :: :  ||:
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARGPLRGYD---YYYYYMDVWGK 116


RESULT 18
S26915
Ig heavy chain V region (DP-10) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S26915
R;Tomlinson, I.M.; Walter, G.; Marks, J.D.; Llewelyn, M.B.; Winter, G.
J. Mol. Biol. 227, 776-798, 1992
A;Title: The repertoire of human germline V(H) sequences reveals about fifty groups of V
A;Reference number: S26885; MUID:93021117; PMID:1404388
A;Accession: S26915
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-98 <TOM>
A;Cross-references: EMBL:Z12312; NID:g32849; PIDN:CAA78182.1; PID:g32850
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             68.6%;  Score 440;  DB 2;  Length 98;
  Best Local Similarity   86.7%;  Pred. No. 1.3e-33;
  Matches   85;  Conservative    6;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| ||||||| || ||||||||||||||||||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCAR 98


RESULT 19
PH1663
Ig heavy chain V region (clone 5B7) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change 16-Aug-1996
C;Accession: PH1663
R;Hillson, J.L.; Karr, N.S.; Oppliger, I.R.; Mannik, M.; Sasso, E.H.
J. Exp. Med. 178, 331-336, 1993
A;Title: The structural basis of germline-encoded VH3 immunoglobulin binding to staphylo
A;Reference number: PH1642; MUID:93301610; PMID:8315388
A;Accession: PH1663
A;Molecule type: mRNA
A;Residues: 1-113 <HIL>
A;Experimental source: B cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;7-90/Domain: immunoglobulin homology <IMM>

  Query Match             68.6%;  Score 440;  DB 2;  Length 113;
  Best Local Similarity   73.2%;  Pred. No. 1.5e-33;
  Matches   90;  Conservative    5;  Mismatches   10;  Indels   18;  Gaps    2;

Qy          9 AEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGRV 68
              ||||||||||: |||||||||    ||:||||||||||||||||||:|||| |:| |||||
Db          1 AEVKKPGSSVKWSCKASGGTFTGYAISWVRQAPGQGLEWMGGIIPIFGTANYAQKFQGRV 60

Qy         69 AITADESTGTASMELSSLRSEDTAVYYCARSR--------DLLLFPHHALSPWGRGTMVT 120
              ||||||| || |||||||||||||||||| |         ||          |||||:||
Db         61 TITADESTSTAYMELSSLRSEDTAVYYCARLRWGSGYWYFDL----------WGRGTLVT 110

Qy        121 VSS 123
              |||
Db        111 VSS 113


RESULT 20
S31698
Ig heavy chain precursor V region - human
C;Species: Homo sapiens (man)
C;Date: 03-Mar-1994 #sequence_revision 03-May-1996 #text_change 23-Jul-1999
C;Accession: S31698
R;Cuisinier, A.M.; Gauthier, L.; Boubli, L.; Fougereau, M.; Tonnelle, C.
submitted to the EMBL Data Library, June 1992
A;Description: Mechanisms that generate human immunoglobulin diversity operate from the
A;Reference number: S31585
A;Accession: S31698
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-116 <CUI>
A;Cross-references: EMBL:Z14214; NID:g37797; PIDN:CAA78583.1; PID:g37798
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;33-116/Domain: immunoglobulin homology <IMM>
F;40-114/Disulfide bonds: #status predicted

  Query Match             68.6%;  Score 440;  DB 2;  Length 116;
  Best Local Similarity   86.7%;  Pred. No. 1.6e-33;
  Matches   85;  Conservative    6;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db         19 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 78

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| ||||||| || ||||||||||||||||||
Db         79 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCAR 116


RESULT 21
S44108
Ig heavy chain V-D-J region - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 24-May-2001
C;Accession: S44108
R;Hawkins, R.E.; Zhu, D.; Ovecka, M.; Winter, G.; Hamblin, T.J.; Stevenson, F.K.
submitted to the EMBL Data Library, March 1994
A;Description: Idiotypic vaccination against human B-cell lymphoma: rescue of variable r
```

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A;Reference number: S44105
A;Accession: S44108
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-123 <HAW>
A;Cross-references: EMBL:Z31397; NID:g472962; PIDN:CAA83272.1; PID:g940520
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             68.6%;  Score 440;  DB 2;  Length 123;
  Best Local Similarity   86.7%;  Pred. No. 1.7e-33;
  Matches   85;  Conservative    6;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| ||||||| || ||||||||||||||||||
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCAR 98


RESULT 22
B32274
Ig heavy chain precursor V-I region (EVI-15) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 18-Oct-1996
C;Accession: B32274
R;Newkirk, M.M.; Gram, H.; Heinrich, G.F.; Oestberg, L.; Capra, J.D.; Wasserman, R.L.
J. Clin. Invest. 81, 1511-1518, 1988
A;Title: Complete protein sequences of the variable regions of the cloned heavy and ligh
actors of the Wa idiotypic family.
A;Reference number: A92767; MUID:88213701; PMID:2452836
A;Accession: B32274
A;Molecule type: DNA
A;Residues: 1-135 <NEW>
A;Cross-references: GB:M20003
A;Note: this sequence was determined from the differentiated gene
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;4-135/Product: Ig heavy chain V-I region EVI-15 #status predicted <HVI>
F;18-101/Domain: immunoglobulin homology <IMM>

  Query Match             68.1%;  Score 436.5;  DB 2;  Length 135;
  Best Local Similarity   67.4%;  Pred. No. 3.9e-33;
  Matches   89;  Conservative   11;  Mismatches   23;  Indels    9;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: | :|||||||||||||||||  ||  |
Db          4 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAFSWVRQAPGQGLEWMGGIIPFLGTTHY 63

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDL------LLFPHH---ALS 111
              :| || || || |||| || |||  |||||||:||||| : |       | |::    :
Db         64 AQKFQDRVTITTDESTRTAYMELHILRSEDTAIYYCARDQSLENIEVVPLDPNYFYDGMD 123

Qy        112 PWGRGTMVTVSS 123
              ||:|| |||||
Db        124 VWGQGTTVTVSS 135


RESULT 23
S24680
Ig heavy chain V1 region - human
C;Species: Homo sapiens (man)
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 23-Jul-1999
C;Accession: S24680
R;van Es, J.H.
submitted to the EMBL Data Library, July 1992
A;Reference number: S24679
A;Accession: S24680
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-98 <VAN>
A;Cross-references: EMBL:X67905; NID:g33128; PIDN:CAA48103.1; PID:g33129
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             68.0%;  Score 436;  DB 2;  Length 98;
  Best Local Similarity   85.7%;  Pred. No. 3.1e-33;
  Matches   84;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| || |||| || ||||||||||||||||||
Db         61 AQKFQGRVTITTDESTSTAYMELSSLRSEDTAVYYCAR 98


RESULT 24
PH1664
Ig heavy chain V region (clone 6A3) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change 16-Aug-1996
C;Accession: PH1664
R;Hillson, J.L.; Karr, N.S.; Oppliger, I.R.; Mannik, M.; Sasso, E.H.
J. Exp. Med. 178, 331-336, 1993
A;Title: The structural basis of germline-encoded VH3 immunoglobulin binding to staphylo
A;Reference number: PH1642; MUID:93301610; PMID:8315388
A;Accession: PH1664
A;Molecule type: mRNA
A;Residues: 1-108 <HIL>
A;Experimental source: B cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;7-90/Domain: immunoglobulin homology <IMM>

  Query Match             67.8%;  Score 434.5;  DB 2;  Length 108;
  Best Local Similarity   75.7%;  Pred. No. 4.7e-33;
  Matches   87;  Conservative    6;  Mismatches   15;  Indels    7;  Gaps    1;

Qy          9 AEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGRV 68
              ||||||||||: |||||||||   ||:||||||||||||||||:|||| |:| |||||
Db          1 AEVKKPGSSVKWSCKASGGTFTGYAISWVRQAPGQGLEWMGGIIPIFGTANYAQKFQGRV 60

Qy         69 AITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTVSS 123
              |||||| || |||||||||||||||||           |  ||:||:|||||
Db         61 TITADESTSTAYMELSSLRSEDTAVYYCARLGT-------GLDYWGQGTLVTVSS 108


RESULT 25
S44106
Ig heavy chain V-D-J region - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 24-May-2001
C;Accession: S44106
R;Hawkins, R.E.; Zhu, D.; Ovecka, M.; Winter, G.; Hamblin, T.J.; Stevenson, F.K.
submitted to the EMBL Data Library, March 1994
A;Description: Idiotypic vaccination against human B-cell lymphoma: rescue of variable r
A;Reference number: S44105
A;Accession: S44106
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-119 <HAW>
A;Cross-references: EMBL:Z31392; NID:g472960; PIDN:CAA83267.1; PID:g940518
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;13-96/Domain: immunoglobulin homology <IMM>

  Query Match             67.3%;  Score 431.5;  DB 2;  Length 119;
  Best Local Similarity   78.0%;  Pred. No. 9.8e-33;
  Matches   85;  Conservative    8;  Mismatches    9;  Indels    7;  Gaps    1;
```

```
Qy          3 QLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQ 62
              || |||||||||||||:||||||||:: ||:||||||||||||||||:|||| |:|
Db          1 QLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANYAQ 60

Qy         63 NFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALS 111
                ||||| ||||||| || ||||||||||||||||        |::|
Db         61 KFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARQA-------HSIS 102


RESULT 26
G1HUEU
Ig heavy chain V-I region (Eu) - human
C;Species: Homo sapiens (man)
C;Date: 23-Oct-1981 #sequence_revision 23-Oct-1981 #text_change 02-Sep-1997
C;Accession: A90563; A02023
R;Cunningham, B.A.; Rutishauser, U.; Gall, W.E.; Gottlieb, P.D.; Waxdal, M.J.; Edelman,
Biochemistry 9, 3161-3170, 1970
A;Title: The covalent structure of a human gammaG-immunoglobulin. VII. Amino acid sequen
A;Reference number: A90563; MUID:71064024; PMID:5489771
A;Accession: A90563
A;Molecule type: protein
A;Residues: 1-117 <CUN>
R;Gall, W.E.; Edelman, G.M.
Biochemistry 9, 3188-3196, 1970
A;Title: The covalent structure of a human gammaG-immunoglobulin. X. Intrachain disulfid
A;Reference number: A90565; MUID:71064027; PMID:4923144
A;Contents: annotation; disulfide bond
C;Comment: The sequence of the gamma-1 C region of this myeloma protein has also been de
C;Genetics:
A;Gene: GDB:IGHV@
A;Cross-references: GDB:128528; OMIM:147070
A;Map position: 14q32.33-14q32.33
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin; pyroglutamic acid
F;15-98/Domain: immunoglobulin homology <IMM>
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;22-96/Disulfide bonds: #status experimental

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 8.8e-32;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 27
A30523
Ig heavy chain V-I region (C6.1-3) - human
C;Species: Homo sapiens (man)
C;Date: 01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change 16-Aug-1996
C;Accession: A30523
R;Schwaber, J.; Koenig, N.; Girard, J.
J. Clin. Invest. 82, 1471-1476, 1988
A;Title: Correction of the molecular defect in B lymphocytes from X-linked agammaglobuli
A;Reference number: A30523; MUID:89008908; PMID:3139715
A;Accession: A30523
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-98 <SCH>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             64.7%;  Score 415;  DB 2;  Length 98;
  Best Local Similarity   80.6%;  Pred. No. 2.6e-31;
  Matches   79;  Conservative    7;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||:  |||||||||||||:|||||:: |  |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFNSAGINWVRQAPGQGLEWVGGIIPIYDTTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| ||||:|| |  ||| ||||||||||||||
Db         61 AQRFQGRVTITADKSTNTVYMELHSLRSEDTAVYYCAR 98


RESULT 28
A49590
Ig heavy chain V region (ACHSV1, clone 15) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 23-May-1997
C;Accession: A49590
R;Burioni, R.; Williamson, R.A.; Sanna, P.P.; Bloom, F.E.; Burton, D.R.
Proc. Natl. Acad. Sci. U.S.A. 91, 355-359, 1994
A;Title: Recombinant human Fab to glycoprotein D neutralizes infectivity and prevents ce
A;Reference number: A49590; MUID:94105168; PMID:8278393
A;Accession: A49590
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Residues: 1-121 <BUR>
A;Experimental source: bone marrow lymphocytes
A;Note: sequence extracted from NCBI backbone (NCBIP:141850)
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;11-94/Domain: immunoglobulin homology <IMM>

  Query Match             64.6%;  Score 414;  DB 2;  Length 121;
  Best Local Similarity   67.5%;  Pred. No. 4e-31;
  Matches   83;  Conservative   11;  Mismatches   21;  Indels    8;  Gaps    2;

Qy          6 QSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQ 65
              :|||||||||||:|||| ||| |:: |||||||||||||||||:|:|||  ::| ||
Db          2 ESGAEVKKPGSSVKVSCKTSGGAFSSYAINWVRQAPGQGLEWMGGILPVFGTTNHAQKFQ 61

Qy         66 GRVAITADESTGTASMELSSLRSEDTAVYYCAR-----SRDLLLFPHHALSPWGRGTMVT 120
              |||  ||| || || |||||||||||||||||     :    |     :  ||:|| |
Db         62 GRVTFTADASTSTAYMELSSLRSEDTAVYYCARVGYCSTNGCSL---GGMDVWGQGTTVI 118

Qy        121 VSS 123
              |||
Db        119 VSS 121


RESULT 29
S46463
Ig heavy chain V1 region (YAC-7) - human
C;Species: Homo sapiens (man)
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 23-Jul-1999
C;Accession: S46463; S24679
R;Cook, G.P.; Tomlinson, I.M.; Walter, G.; Riethman, H.; Carter, N.P.; Buluwela, L.; Win
Nature Genet. 7, 162-168, 1994
A;Title: A map of the human immunoglobulin V(H) locus completed by analysis of the telom
A;Reference number: S46460; MUID:95004581; PMID:7920635
A;Accession: S46463
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-98 <COO>
A;Cross-references: EMBL:Z27506; NID:g505449; PIDN:CAA81826.1; PID:g505450
R;van Es, J.H.
submitted to the EMBL Data Library, July 1992
A;Reference number: S24679
A;Accession: S24679
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-98 <VAN>
A;Cross-references: EMBL:X67902; NID:g33126; PIDN:CAA48101.1; PID:g33127
```

```
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             64.3%;  Score 412;  DB 2;  Length 98;
  Best Local Similarity   81.6%;  Pred. No. 4.9e-31;
  Matches   80;  Conservative    7;  Mismatches   11;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||::  |:|||||||||||||| |||: | | |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYTISWVRQAPGQGLEWMGRIIPILGIANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| ||||:|| || ||||||||||||||||||
Db         61 AQKFQGRVTITADKSTSTAYMELSSLRSEDTAVYYCAR 98


RESULT 30
PH1671
Ig heavy chain V region (clone 3C9) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change 16-Aug-1996
C;Accession: PH1671
R;Hillson, J.L.; Karr, N.S.; Oppliger, I.R.; Mannik, M.; Sasso, E.H.
J. Exp. Med. 178, 331-336, 1993
A;Title: The structural basis of germline-encoded VH3 immunoglobulin binding to staphylc
A;Reference number: PH1642; MUID:93301610; PMID:8315388
A;Accession: PH1671
A;Molecule type: mRNA
A;Residues: 1-109 <HIL>
A;Experimental source: B cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;7-90/Domain: immunoglobulin homology <IMM>

  Query Match             64.0%;  Score 410;  DB 2;  Length 109;
  Best Local Similarity   70.6%;  Pred. No. 8.4e-31;
  Matches   84;  Conservative    9;  Mismatches   12;  Indels   14;  Gaps    2;

Qy          9 AEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGRV 68
              ||||||||||:|||||||||:: ||:|||||||||||||| |||: | | |:| |||||
Db          1 AEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGRIIPILGIANYAQKFQGRV 60

Qy         69 AITADESTGTASMELSSLRSEDTAVYYCA----RSRDLLLFPHHALSPWGRGTMVTVSS 123
                ||||:|| || |||||||||||||||||     | |          ||:||:|||||
Db         61 TITADKSTSTAYMELSSLRSEDTAVYYCAWTNWGSGDY----------WGQGTLVTVSS 109


RESULT 31
C49590
Ig heavy chain V region (ACHSV1, clone 13) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 23-May-1997
C;Accession: C49590
R;Burioni, R.; Williamson, R.A.; Sanna, P.P.; Bloom, F.E.; Burton, D.R.
Proc. Natl. Acad. Sci. U.S.A. 91, 355-359, 1994
A;Title: Recombinant human Fab to glycoprotein D neutralizes infectivity and prevents ce
A;Reference number: A49590; MUID:94105168; PMID:8278393
A;Accession: C49590
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Residues: 1-122 <BUR>
A;Experimental source: bone marrow lymphocytes
A;Note: sequence extracted from NCBI backbone (NCBIP:141852)
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;12-95/Domain: immunoglobulin homology <IMM>

  Query Match             64.0%;  Score 410;  DB 2;  Length 122;
  Best Local Similarity   65.6%;  Pred. No. 9.4e-31;
  Matches   80;  Conservative   16;  Mismatches   24;  Indels    2;  Gaps    1;

Qy          4 LQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQN 63
              |:|||||||||||||:||||||||:|:: |||||||||||||||||::|:|||  |:|
Db          1 LEQSGAEVKKPGSSVKVSCKASGGSFSSYAINWVRQAPGQGLEWMGGLMPIFGTTNYAQK 60

Qy         64 FQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLL--LFPHHALSPWGRGTMVTV 121
              || |: |||| || || |:|: |  ||||:|||||   :|       |  ||:|| |||
Db         61 FQDRLTITADVSTSTAYMQLTGLTYEDTAMYYCARVAYMLEPTVTAGGLDVWGQGTTVTV 120

Qy        122 SS 123
              :|
Db        121 AS 122


RESULT 32
S31667
Ig heavy chain V region - human
C;Species: Homo sapiens (man)
C;Date: 03-Mar-1994 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S31667
R;Cuisinier, A.M.; Gauthier, L.; Boubli, L.; Fougereau, M.; Tonnelle, C.
submitted to the EMBL Data Library, June 1992
A;Description: Mechanisms that generate human immunoglobulin diversity operate from the
A;Reference number: S31585
A;Accession: S31667
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-116 <CUI>
A;Cross-references: EMBL:Z14215; NID:g37799; PIDN:CAA78584.1; PID:g37800
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;33-116/Domain: immunoglobulin homology <IMM>

  Query Match             63.5%;  Score 407;  DB 2;  Length 116;
  Best Local Similarity   81.6%;  Pred. No. 1.7e-30;
  Matches   80;  Conservative    6;  Mismatches   12;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| ||||||||||:||:|||||||  || : |:|||||||| ||||| |||:|||| |
Db         19 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYAMNWVRQAPGQRLEWMGWIIPIFGTANY 78

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
              :| ||||| |||||||  || ||||||||||  |||||||
Db         79 AQKFQGRVTITADESTSTAYMELSSLRSEDMAVYYCAR 116


RESULT 33
PH0870
Ig heavy chain V region (anti-DNA, III-2R) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 09-Oct-1992 #sequence_revision 09-Oct-1992 #text_change 16-Aug-1996
C;Accession: PH0870
R;Manheimer-Lory, A.; Katz, J.B.; Pillinger, M.; Ghossein, C.; Smith, A.; Diamond, B.
J. Exp. Med. 174, 1639-1652, 1991
A;Title: Molecular characteristics of antibodies bearing an anti-DNA-associated idiotype
A;Reference number: PH0862; MUID:92078875; PMID:1660528
A;Accession: PH0870
A;Molecule type: DNA
A;Residues: 1-97 <MAN>
C;Comment: This antibody is produced by Epstein-Barr virus-transformed B cell that bears
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;14-97/Domain: immunoglobulin homology <IMM>
F;30-34/Region: complementarity-determining 1
F;46-65/Region: complementarity-determining 2

  Query Match             63.0%;  Score 404;  DB 2;  Length 97;
  Best Local Similarity   80.4%;  Pred. No. 2.6e-30;
  Matches   78;  Conservative    8;  Mismatches   11;  Indels    0;  Gaps    0;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||| |||||||||||||:||||||||::  |:|||||||||||||| |:|: | | |:
Db          1 VQLVQSGAEVKKPGSSVKVSCKASGGTFSSYTISWVRQAPGQGLEWMGRIMPILGLANYA 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR 98
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```
Db         61 QKFQGRVTITADKSTSTAYMELSSLRSEDTAVYYCAR 97


RESULT 34
S36265
Ig heavy chain V region (clone alpha-MUC1-1) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
C;Accession: S36265
R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.
EMBO J. 12, 725-734, 1993
A;Title: Human anti-self antibodies with high specificity from phage display libraries.
A;Reference number: S36256; MUID:93178448; PMID:7679990
A;Accession: S36265
A;Status: preliminary; nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-118 <GRI>
A;Cross-references: EMBL:Z18846; NID:g33121; PIDN:CAA79298.1; PID:g939900
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;5-98/Domain: immunoglobulin homology <IMM>

  Query Match             62.8%;  Score 402.5;  DB 2;  Length 118;
  Best Local Similarity   68.3%;  Pred. No. 4.4e-30;
  Matches   84;  Conservative    7;  Mismatches   27;  Indels    5;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| ||    ::||||||||||||||| | |  |   |
Db          1 QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| || | |  || ||||||||||||||||||      |    |  ||:||:||
Db         61 AQKFQGRVTITRDTSASTAYMELSSLRSEDTAVYYCARD-----FLSGYLDYWGQGTLVT 115

Qy        121 VSS 123
              |||
Db        116 VSS 118


RESULT 35
S19665
Ig heavy chain V region (alpha-phOx15) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 20-Jun-2000
C;Accession: S19665; S24442
R;Marks, J.D.; Hoogenboom, H.R.; Bonnert, T.P.; McCafferty, J.; Griffiths, A.D.; Winter,
J. Mol. Biol. 222, 581-597, 1991
A;Title: By-passing immunization. Human antibodies from V-gene libraries displayed on ph
A;Reference number: S19663; MUID:92085276; PMID:1748994
A;Accession: S19665
A;Molecule type: mRNA
A;Residues: 1-124 <MAR>
A;Cross-references: EMBL:X61647
R;Jones, P.T.
submitted to the EMBL Data Library, October 1991
A;Reference number: S24442
A;Accession: S24442
A;Molecule type: mRNA
A;Residues: 1-40,'GLSGWDGSALTMVTQSILDK',61-118,'T',120-124 <JON>
A;Cross-references: EMBL:X61647; NID:g37667; PIDN:CAA43828.1; PID:g1335368
A;Note: the difference for residues 41-60 results from misplacement of 10 bases in the s
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             62.6%;  Score 401.5;  DB 2;  Length 124;
  Best Local Similarity   63.6%;  Pred. No. 5.8e-30;
  Matches   82;  Conservative   11;  Mismatches   25;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| ||  :  |:|||||||||||||| |    |  ||
Db          1 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGWISAYNGNTKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFP------HHALSPWG 114
              :|  |||| :| | || || ||| ||||:||||||| |     | |      |: :  ||
Db         61 AQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCVR-----LLPKRTATLHYYIDVWG 115

Qy        115 RGTMVTVSS 123
              :|||:|||||
Db        116 KGTLVTVSS 124


RESULT 36
S31600
Ig heavy chain V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S31600
R;Cuisinier, A.M.; Gauthier, L.; Boubli, L.; Fougereau, M.; Tonnelle, C.
submitted to the EMBL Data Library, June 1992
A;Description: Mechanisms that generate human immunoglobulin diversity operate from the
A;Reference number: S31585
A;Accession: S31600
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-136 <CUI>
A;Cross-references: EMBL:Z14165; NID:g30994; PIDN:CAA78534.1; PID:g30995
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>

  Query Match             62.5%;  Score 400.5;  DB 2;  Length 136;
  Best Local Similarity   67.5%;  Pred. No. 7.9e-30;
  Matches   83;  Conservative    9;  Mismatches   24;  Indels    7;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:|||:||| || :  |||||| |||||||| : |  |   |
Db         20 QVQLVQSGAEVKKPGASVKVSCRASGYTFTSYDINWVRQATGQGLEWMGWMNPNSGNTGY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| :| : |  || ||||||||||||||||||  ||       |   ||:|||||
Db         80 AQKFQGRVTMTRNTSISTAYMELSSLRSEDTAVYYCARWRD-------AFDIWGQGTMVT 132

Qy        121 VSS 123
              |||
Db        133 VSS 135


RESULT 37
A32483
Ig heavy chain V region - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 12-Oct-1989 #sequence_revision 12-Oct-1989 #text_change 16-Aug-1996
C;Accession: A32483
R;Larrick, J.W.; Danielsson, L.; Brenner, C.A.; Abrahamson, M.; Fry, K.E.; Borrebaeck, C
Biochem. Biophys. Res. Commun. 160, 1250-1256, 1989
A;Title: Rapid cloning of rearranged immunoglobulin genes from human hybridoma cells usi
A;Reference number: A32483; MUID:89273586; PMID:2499327
A;Accession: A32483
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-142 <LAR>
A;Cross-references: GB:M26463
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;25-108/Domain: immunoglobulin homology <IMM>

  Query Match             61.9%;  Score 397;  DB 2;  Length 142;
  Best Local Similarity   63.6%;  Pred. No. 1.7e-29;
  Matches   82;  Conservative   13;  Mismatches   26;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:|||||| || |  ::|||||||||||||| | |   :  |
Db         11 QVQLVQSGAEVKKPGASVKVSCKASGYTFTNYYMHWVRQAPGQGLEWMGIINPSGNSTNY 70
```

```
Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSR------DLLLFPHHALSPWG 114
               :| ||||| :| | || |  ||||||||||||||||||| :       :|:     :  ||
Db          71 AQKFQGRVTMTRDTSTSTVYMELSSLRSEDTAVYYCAREKLATTIFGVLIIT--GMDYWG 128

Qy         115 RGTMVTVSS 123
               :||:|||||
Db         129 QGTLVTVSS 137


RESULT 38
S36260
Ig heavy chain V region (clone alpha-CEA4-8A) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
C;Accession: S36260
R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, J.
EMBO J. 12, 725-734, 1993
A;Title: Human anti-self antibodies with high specificity from phage display libraries.
A;Reference number: S36256; MUID:93178448; PMID:7679990
A;Accession: S36260
A;Status: preliminary; nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-129 <GRI>
A;Cross-references: EMBL:Z18851; NID:g33124; PIDN:CAA79303.1; PID:g939903
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             61.8%;  Score 396;  DB 2;  Length 129;
  Best Local Similarity   62.8%;  Pred. No. 1.9e-29;
  Matches   81;  Conservative   12;  Mismatches   30;  Indels    6;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||||||||:||:||||||| || :  |:||||||||||||| |    |   |
Db          1 QVQLQQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGWISAYNGNTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR------SRDLLLFPHHALSPWG 114
               :|  |||| :| | || || ||| ||||:|||||||||      |     : :: :  ||
Db         61 AQKLQGRVTMTTDTSTSTAYMELRSLRSDDTAVYYCARDSFGYCSSTSCPYYYYYMDVWG 120

Qy        115 RGTMVTVSS 123
               :|| |||||
Db        121 KGTTVTVSS 129


RESULT 39
F49590
Ig heavy chain V region (ACHSV2, clone 11) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 06-Oct-1994 #sequence_revision 18-Nov-1994 #text_change 23-May-1997
C;Accession: F49590
R;Burioni, R.; Williamson, R.A.; Sanna, P.P.; Bloom, F.E.; Burton, D.R.
Proc. Natl. Acad. Sci. U.S.A. 91, 355-359, 1994
A;Title: Recombinant human Fab to glycoprotein D neutralizes infectivity and prevents ce
A;Reference number: A49590; MUID:94105168; PMID:8278393
A;Accession: F49590
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Residues: 1-119 <BUR>
A;Experimental source: bone marrow lymphocytes
A;Note: sequence extracted from NCBI backbone (NCBIP:141855)
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;12-95/Domain: immunoglobulin homology <IMM>

  Query Match             61.5%;  Score 394.5;  DB 2;  Length 119;
  Best Local Similarity   64.5%;  Pred. No. 2.4e-29;
  Matches   78;  Conservative   16;  Mismatches   24;  Indels    3;  Gaps    2;

Qy          4 LQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQN 63
              |::|||||:|||||||||||||| ||:|:|:::|||||||:|||||||:|: | |
Db          1 LEESGAEMKKPGSSVRVSCKASGFTFHNHAVSWVRQAPGEGLEWMGGLIPIVGLANLQPR 60

Qy         64 FQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-SRDLLLFPHHALSPWGRGTMVTVS 122
              ||||| |:||||| || ||: || |:|||:||| |   |   ||   |  ||:| :| ||
Db         61 FQGRVTISADESTNTAYMEMRSLTSDDTAIYYCVRHGDDSSGFPPPFDL--WGQGALVIVS 118

Qy        123 S 123
               |
Db        119 S 119


RESULT 40
S49530
anti-Sm antibody VH chain (VH1/DK1 or DM1/JH4b) - human
C;Species: Homo sapiens (man)
C;Date: 01-Feb-1995 #sequence_revision 12-May-1995 #text_change 23-Jul-1999
C;Accession: S49530
R;Mahmoudi, M.; Edwards, J.; Cairns, E.; Bell, D.
submitted to the EMBL Data Library, October 1994
A;Description: Molecular characterization of natural human anti-Sm autoantibodies.
A;Reference number: S48797
A;Accession: S49530
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-135 <MAH>
A;Cross-references: EMBL:Z46348; NID:g560839; PIDN:CAA86467.1; PID:g560840
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;34-117/Domain: immunoglobulin homology <IMM>

  Query Match             61.2%;  Score 392.5;  DB 2;  Length 135;
  Best Local Similarity   65.0%;  Pred. No. 4.2e-29;
  Matches   80;  Conservative   11;  Mismatches   25;  Indels    7;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| ||    ::|||||||||||||| | |   |   |
Db         20 QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               :| ||||| :| | |  || |||| |||:||||||||:|         : ||:||:||
Db         80 AQKFQGRVTMTRDTSISTAYMELSRLRSDDTAVYYCARART-------GYNYWGQGTLVT 132

Qy        121 VSS 123
               |||
Db        133 VSS 135


RESULT 41
D33548
Ig heavy chain V-1 region (WIL2) - human
C;Species: Homo sapiens (man)
C;Date: 17-Jan-1990 #sequence_revision 17-Jan-1990 #text_change 16-Aug-1996
C;Accession: D33548
R;Kipps, T.J.; Tomhave, E.; Pratt, L.F.; Duffy, S.; Chen, P.P.; Carson, D.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 5913-5917, 1989
A;Title: Developmentally restricted immunoglobulin heavy chain variable region gene expr
A;Reference number: A33548; MUID:89345575; PMID:2503826
A;Accession: D33548
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
A;Molecule type: mRNA
A;Residues: 1-123 <KIP>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             60.4%;  Score 387;  DB 2;  Length 123;
  Best Local Similarity   63.4%;  Pred. No. 1.2e-28;
  Matches   78;  Conservative   14;  Mismatches   31;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:|||:||| ||  : ::|||||||||||||| | |   |   |
Db          1 QVQLVQSGAEVKKPGASVKVSCEASGYTFTGHYMHWVRQAPGQGLEWMGWINPNSGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               :: ||||| || | |  || |||| |||:|||||||||:       ::    ||:||:||
Db         61 AEKFQGRVTITRDTSINTAYMELSRLRSDDTAVYYCARASYCGYDCYYFFDYWGQGTLVT 120
```

```
Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 42
S20783
Ig heavy chain V region - human
C;Species: Homo sapiens (man)
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 21-Jan-2000
C;Accession: S20783
R;Mortari, F.; Wang, J.; Schroeder, H.W.
submitted to the EMBL Data Library, April 1992
A;Description: Analysis of human cord blood Ig heavy chain IgA and IgG repertoire.
A;Reference number: S20764
A;Accession: S20783
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-121 <MOR>
A;Cross-references: EMBL:Z11957; NID:g33899; PIDN:CAA78014.1; PID:g33900
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match   59.6%; Score 382; DB 2; Length 121;
  Best Local Similarity   62.6%; Pred. No. 3.5e-28;
  Matches   77; Conservative   13; Mismatches   31; Indels   2; Gaps   1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||:|| ||||||| || :  ::|||||||||||||| | |  |:  :
Db          1 QVQLVQSGAEVKKPGASVTVSCKASGYTFTSYFMHWVRQAPGQGLEWMGMINPHGGSTTF 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :|  |||  :| | || |  |:|| |||||||:|||||  |    |   :  ||:||:||
Db         61 AQKLQGRATMTRDTSTSTVYMDLSGLRSEDTALYYCARGSD--TSPASTIDYWGQGTLVT 118

Qy        121 VSS 123
              |||
Db        119 VSS 121
```

RESULT 43
S34014
Ig heavy chain V region - human
C;Species: Homo sapiens (man)
C;Date: 02-Dec-1993 #sequence_revision 10-Nov-1995 #text_change 16-Aug-1996
C;Accession: S34014; S30535
R;[redacted]riette, X.; Tsapis, A.; Brouet, J.C.
J. Immunol. 23, 846-851, 1993
A;Title: Nucleotidic sequence analysis of the variable domains of four human monoclonal
A;Reference number: S34001; MUID:93209281; PMID:7681398
A;Accession: S34014
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-127 <MAR>
A;Cross-references: EMBL:Z18321
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match   59.6%; Score 382; DB 2; Length 127;
  Best Local Similarity   61.4%; Pred. No. 3.6e-28;
  Matches   78; Conservative   17; Mismatches   28; Indels   4; Gaps   1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||: |||||||||:||:||||||| || :  ||||||| |||||||| : |  |    |
Db          1 QVQMVQSGAEVKKPGASVKVSCKASGYTFTSYDINWVRQATGQGLEWMGWMNPSSGNTGY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDL----LLFPHHALSPWGRG 116
              :| |:||| :| : |  || ||||||||||||||:|||:  :    :   ::||  ||:|
Db         61 AQKFKGRVTMTRNTSISTAYMELSSLRSEDTAVYFCARALSIGVAVIRGYYYALDVWGQG 120

Qy        117 TMVTVSS 123
              | |:|||
Db        121 TTVSVSS 127
```

RESULT 44
S29257
Ig heavy chain V region precursor - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 13-Mar-1997 #text_change 21-Jan-2000
C;Accession: S29257
R;Chouchane, L.; van Spronsen, A.; Breyer, J.; Guglielmi, P.; Strosberg, A.D.
Eur. J. Biochem. 207, 1115-1121, 1992
A;Title: Molecular characterization of a human anti-Rh(D) antibody with a D(H) segment e
A;Reference number: S29257; MUID:92362614; PMID:1499555
A;Accession: S29257
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-148 <CHO>
A;Cross-references: GB:S42403; NID:g253699; PIDN:AAB22940.1; PID:g253700
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;34-117/Domain: immunoglobulin homology <IMM>

  Query Match   59.3%; Score 380; DB 2; Length 148;
  Best Local Similarity   63.6%; Pred. No. 6.5e-28;
  Matches   82; Conservative   8; Mismatches   33; Indels   6; Gaps   1;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| ||||||||||:||:||||||| ||   ||:|||||||| ||||| |   |  ||
Db         20 QVQLVQSGAEVKKPGASVKVSCKASGYTFAMYAIHWVRQAPGQSLEWMGWISVADGKTKY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARS------RDLLLFPHHALSPWG 114
              || || || || | |  || ||:  |||||||||||||      | :|:        ||
Db         80 SQKFQDRVTITRDTSATTAYMEVRGLRSEDTAVYYCARSPRINMVRGVLITTPPWFDSWG 139

Qy        115 RGTMVTVSS 123
              :||:| |||
Db        140 QGTLVIVSS 148
```

RESULT 45
PH1667
Ig heavy chain V region (clone 2H7) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change 16-Aug-1996
C;Accession: PH1667
R;Hillson, J.L.; Karr, N.S.; Oppliger, I.R.; Mannik, M.; Sasso, E.H.
J. Exp. Med. 178, 331-336, 1993
A;Title: The structural basis of germline-encoded VH3 immunoglobulin binding to staphylo
A;Reference number: PH1642; MUID:93301610; PMID:8315388
A;Accession: PH1667
A;Molecule type: mRNA
A;Residues: 1-114 <HIL>
A;Experimental source: B cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;7-90/Domain: immunoglobulin homology <IMM>

  Query Match   58.4%; Score 374.5; DB 2; Length 114;
  Best Local Similarity   67.8%; Pred. No. 1.6e-27;
  Matches   78; Conservative   9; Mismatches   27; Indels   1; Gaps   1;

```
Qy          9 AEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGRV 68
              |||||||:||:||||||| || : |::|||||||| ||||| |     |  ||:| |||||
Db          1 AEVKKPGASVKVSCKASGYTFTSYAMHWVRQAPGQRLEWMGWINAGNGNTKYAQKFQGRV 60

Qy         69 AITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTVSS 123
              || | |  || ||||||||||||||||||  |      ::|   ||:|||||||||
Db         61 TITRDTSASTAYMELSSLRSEDTAVYYCARVYD-FWSGYYAFDIWGQGTMVTVSS 114
```

RESULT 46
S46393

```
Ig heavy chain V region - human
C;Species: Homo sapiens (man)
C;Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 20-Jun-2000
C;Accession: S46393
R;Pigini, M.; Marks, J.D.; Winter, G.; Griffiths, A.D.
J. Mol. Biol. 239, 68-78, 1994
A;Title: In vitro assembly of repertoires of antibody chains on the surface of phage by
A;Reference number: S46390; MUID:94254092; PMID:8196048
A;Accession: S46393
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-129 <FIG>
A;Cross-references: EMBL:Z31680; NID:g509786; PIDN:CAA83485.1; PID:g1335146
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>

  Query Match             58.3%;  Score 374;  DB 2;  Length 129;
  Best Local Similarity   60.3%;  Pred. No. 2e-27;
  Matches   79;  Conservative   12;  Mismatches   30;  Indels   10;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| ||    ::|||||||||||||| | |  |   |
Db          1 QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLF--------PHHALSP 112
              :| ||| | :| | |  || |||| |||:|||||||  ||   :         :: :
Db         61 AQKFQGWVTMTRDTSISTAYMELSRLRSDDTAVYYCA--RDSAYYYDSSGYYSANYYMDV 118

Qy        113 WGRGTMVTVSS 123
              ||:|| |||||
Db        119 WGKGTTVTVSS 129


RESULT 47
PL0105
anti-PR2 erythrocyte autoantibody heavy chain precursor - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 26-Apr-1996
C;Accession: PL0105
R;Silberstein, L.E.; Litwin, S.; Carmack, C.E.
J. Exp. Med. 169, 1631-1643, 1989
A;Title: Relationship of variable region genes expressed by a human B cell lymphoma secr
A;Reference number: PL0106; MUID:89235583; PMID:2541221
A;Accession: PL0105
A;Molecule type: mRNA
A;Residues: 1-160 <SIL>
A;Note: the authors translated the codon GAC for residues 108 and 109 as Glu
C;Comment: The antibody is one of the cold agglutinins that preferentially bind red bloc
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: autoantibody; hemagglutinin
F;1-19/Domain: signal sequence #status predicted <SIG>
F;34-117/Domain: immunoglobulin homology <IMM>
F;49-54/Region: complementarity-determining 1
F;69-84/Region: complementarity-determining 2
F;118-131/Domain: D region <DRG>
F;132-144/Domain: J4 segment <JSG>
F;145-160/Domain: C region <CRG>

  Query Match             58.2%;  Score 373;  DB 2;  Length 160;
  Best Local Similarity   59.5%;  Pred. No. 3.1e-27;
  Matches   78;  Conservative   12;  Mismatches   27;  Indels   14;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||  ||||| |||:||:||||||| || :  |:|||||||||||| |    |   |
Db         20 QVQLVASGAEVNKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLEWMGWISVYNGDTNY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP-------- 112
              :|| |||| :| | || || ||| :|||:|||||||:       | :
Db         80 AQNLQGRVTMTTDTSTSTAYMELRNLRSDDTAVYYCARA------PGYCSGGGCYRGDDY 133

Qy        113 WGRGTMVTVSS 123
              ||:||:|||||
Db        134 WGQGTLVTVSS 144


RESULT 48
S23623
Ig heavy chain V region precursor - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 23-Jul-1999
C;Accession: S23623
R;Olee, T.; Lu, E.W.; Huang, D.F.; Soto-Gil, R.W.; Deftos, M.; Kozin, F.; Carson, D.A.;
J. Exp. Med. 175, 831-842, 1992
A;Title: Genetic analysis of self-associating immunoglobulin G rheumatoid factors from t
A;Reference number: S23623; MUID:92156804; PMID:1740665
A;Accession: S23623
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-171 <OLE>
A;Cross-references: EMBL:X59702; NID:g32010; PIDN:CAA42223.1; PID:g32011
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>

  Query Match             58.1%;  Score 372.5;  DB 2;  Length 171;
  Best Local Similarity   62.5%;  Pred. No. 3.7e-27;
  Matches   80;  Conservative    7;  Mismatches   34;  Indels    7;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| ||||||||||:||:|||| || ||    ::|||||||||||||| | |  |   |
Db         20 QVQLVQSGAEVKKPGASVKVSCKGSGYTFTAYQMHWVRQAPGQGLEWMGWINPNSGGTGY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA-----RSRDLLLFPHHALSPWGR 115
              | ||||| :| | |  || |||| | |:||||||||         ||   |      ||:
Db         80 GQKFQGRVTLTRDTSISTAYMELSRLTSDDTAVYYCAIEYFYDGSDLK--PSDVFDIWGQ 137

Qy        116 GTMVTVSS 123
              ||||||||
Db        138 GTMVTVSS 145


RESULT 49
PH1665
Ig heavy chain V region (clone 6BG8) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change 16-Aug-1996
C;Accession: PH1665
R;Hillson, J.L.; Karr, N.S.; Oppliger, I.R.; Mannik, M.; Sasso, E.H.
J. Exp. Med. 178, 331-336, 1993
A;Title: The structural basis of germline-encoded VH3 immunoglobulin binding to staphyloc
A;Reference number: PH1642; MUID:93301610; PMID:8315388
A;Accession: PH1665
A;Molecule type: mRNA
A;Residues: 1-104 <HIL>
A;Experimental source: B cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;7-90/Domain: immunoglobulin homology <IMM>

  Query Match             57.8%;  Score 370.5;  DB 2;  Length 104;
  Best Local Similarity   66.1%;  Pred. No. 3.4e-27;
  Matches   76;  Conservative    8;  Mismatches   20;  Indels   11;  Gaps    1;

Qy          9 AEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGRV 68
              |||||||:||:||||||| || : |::|||||||| |||||||     |  ||:| |||||
Db          1 AEVKKPGASVKVSCKASGYTFTSYAMHWVRQAPGQRLEWMGGINAGNGNTKYAQKFQGRV 60

Qy         69 AITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTVSS 123
              || | |  || ||||||||||||||||||              ||:||:|||||
Db         61 TITRDTSASTAYMELSSLRSEDTAVYYCARE----------DYWGQGTLVTVSS 104


RESULT 50
S31596
Ig heavy chain V region - human (fragment)
```

C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S31596
R;Cuisinier, A.M.; Gauthier, L.; Boubli, L.; Fougereau, M.; Tonnelle, C.
submitted to the EMBL Data Library, June 1992
A;Description: Mechanisms that generate human immunoglobulin diversity operate from the
A;Reference number: S31585
A;Accession: S31596
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-132 <CUI>
A;Cross-references: EMBL:Z14166; NID:g30996; PIDN:CAA78535.1; PID:g30997
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>

Query Match 57.8%; Score 370.5; DB 2; Length 132;
Best Local Similarity 62.6%; Pred. No. 4.3e-27;
Matches 77; Conservative 12; Mismatches 23; Indels 11; Gaps 1;

```
Q           1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:|||||||| || :  |:||||| |||||||| : |  |   |
Db         20 QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYDIDWVRQATGQGLEWMGWMNPNSGNTGY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||| :| : |  || |||||||:||||||| |::           ||:|||||
Db         80 AQKFQGRVTMTRNTSISTAYMELSSLRAEDTAVYYLAKA----------PAWGQGTMVT 128

Qy        121 VSS 123
              |||
Db        129 VSS 131
```

Search completed: November 26, 2003, 13:41:41
Job time : 15.1923 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:41:10 ; Search time 26.2821 Seconds
(without alignments)
863.195 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 673684 seqs, 184443283 residues

number of hits satisfying chosen parameters: 673684

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	641	100.0	249	11	US-09-880-748-327	Sequence 327, App
2	626	97.7	249	11	US-09-880-748-785	Sequence 785, App
3	622	97.0	249	11	US-09-880-748-527	Sequence 527, App
4	622	97.0	249	11	US-09-880-748-684	Sequence 684, App
5	622	97.0	249	11	US-09-880-748-804	Sequence 804, App
6	621	96.9	249	11	US-09-880-748-660	Sequence 660, App
7	620	96.7	249	11	US-09-880-748-344	Sequence 344, App
8	620	96.7	249	11	US-09-880-748-363	Sequence 363, App
9	620	96.7	249	11	US-09-880-748-664	Sequence 664, App
10	619	96.6	249	11	US-09-880-748-590	Sequence 590, App
11	619	96.6	249	11	US-09-880-748-821	Sequence 821, App
12	618	96.4	249	11	US-09-880-748-324	Sequence 324, App
13	618	96.4	249	11	US-09-880-748-325	Sequence 325, App
14	618	96.4	249	11	US-09-880-748-596	Sequence 596, App
15	618	96.4	249	11	US-09-880-748-701	Sequence 701, App
16	617	96.3	249	11	US-09-880-748-366	Sequence 366, App
17	617	96.3	249	11	US-09-880-748-404	Sequence 404, App
18	617	96.3	249	11	US-09-880-748-486	Sequence 486, App
19	617	96.3	249	11	US-09-880-748-723	Sequence 723, App
20	617	96.3	249	11	US-09-880-748-743	Sequence 743, App
21	616	96.1	249	11	US-09-880-748-375	Sequence 375, App
22	616	96.1	249	11	US-09-880-748-399	Sequence 399, App
23	616	96.1	249	11	US-09-880-748-696	Sequence 696, App
24	616	96.1	249	11	US-09-880-748-698	Sequence 698, App
25	616	96.1	249	11	US-09-880-748-709	Sequence 709, App
26	616	96.1	249	11	US-09-880-748-713	Sequence 713, App
27	616	96.1	249	11	US-09-880-748-729	Sequence 729, App
28	615	95.9	249	11	US-09-880-748-415	Sequence 415, App
29	615	95.9	249	11	US-09-880-748-428	Sequence 428, App
30	615	95.9	249	11	US-09-880-748-644	Sequence 644, App
31	615	95.9	249	11	US-09-880-748-655	Sequence 655, App
32	615	95.9	249	11	US-09-880-748-722	Sequence 722, App
33	615	95.9	249	11	US-09-880-748-748	Sequence 748, App
34	615	95.9	249	11	US-09-880-748-765	Sequence 765, App
35	615	95.9	249	11	US-09-880-748-786	Sequence 786, App
36	615	95.9	249	11	US-09-880-748-789	Sequence 789, App
37	615	95.9	249	11	US-09-880-748-794	Sequence 794, App
38	614	95.8	249	11	US-09-880-748-322	Sequence 322, App
39	614	95.8	249	11	US-09-880-748-329	Sequence 329, App
40	614	95.8	249	11	US-09-880-748-433	Sequence 433, App
41	614	95.8	249	11	US-09-880-748-461	Sequence 461, App
42	614	95.8	249	11	US-09-880-748-574	Sequence 574, App
43	614	95.8	249	11	US-09-880-748-652	Sequence 652, App
44	614	95.8	249	11	US-09-880-748-717	Sequence 717, App
45	614	95.8	249	11	US-09-880-748-744	Sequence 744, App

ALIGNMENTS

RESULT 1
US-09-880-748-327
; Sequence 327, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 327
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-327

Query Match 100.0%; Score 641; DB 11; Length 249;
Best Local Similarity 100.0%; Pred. No. 3e-54;
Matches 123; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120

Qy        121 VSS 123
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Db        121 VSS 123


RESULT 2
US-09-880-748-785
; Sequence 785, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 785
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-785

  Query Match             97.7%;  Score 626;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 8.4e-53;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||| | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLEPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 3
US-09-880-748-527
; Sequence 527, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 527
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-527

  Query Match             97.0%;  Score 622;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.1e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||| | |||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPQHPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 4
US-09-880-748-684
; Sequence 684, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 684
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-684

  Query Match             97.0%;  Score 622;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.1e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||| | |||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHEPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 5
US-09-880-748-804
; Sequence 804, Application US/09880748
; Publication No. US20030059937A1
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; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 804
;  LENGTH: 249
;  TYPE: PRT
;  ORGANISM: Homo sapiens
US-09-880-748-804

  Query Match             97.0%;  Score 622;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.1e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALDVWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||||  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHALDVWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 6
US-09-880-748-660
; Sequence 660, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 660
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-660

  Query Match             96.9%;  Score 621;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.6e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 7
US-09-880-748-344
; Sequence 344, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 344
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-344

  Query Match             96.7%;  Score 620;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 3.2e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 8
US-09-880-748-363
; Sequence 363, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
```

```
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 363
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-363

  Query Match             96.7%;  Score 620;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 3.2e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSYLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 9
US-09-880-748-664
; Sequence 664, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 664
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-664

  Query Match             96.7%;  Score 620;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 3.2e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 10
US-09-880-748-590
; Sequence 590, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 590
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-590

  Query Match             96.6%;  Score 619;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 4e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  || ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLSFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 11
US-09-880-748-821
; Sequence 821, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 821
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
```

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US-09-880-748-821

  Query Match             96.6%;  Score 619;  DB 11;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 4e-52;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||  ||||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHANLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 12
US-09-880-748-324
; Sequence 324, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 324
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-324

  Query Match             96.4%;  Score 618;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||  |  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGLDVWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 13
US-09-880-748-325
; Sequence 325, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 325
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-325

  Query Match             96.4%;  Score 618;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 14
US-09-880-748-596
; Sequence 596, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 596
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-596

  Query Match             96.4%;  Score 618;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
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              |||||||||||||||| |||||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 15
US-09-880-748-701
; Sequence 701, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 701
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-701

  Query Match             96.4%;  Score 618;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||| |  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLDSWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 16
US-09-880-748-366
; Sequence 366, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 366
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-366

  Query Match             96.3%;  Score 617;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.3e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 17
US-09-880-748-404
; Sequence 404, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 404
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-404

  Query Match             96.3%;  Score 617;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.3e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLTPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 18
US-09-880-748-486
; Sequence 486, Application US/09880748
```

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; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 486
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-486

  Query Match             96.3%;  Score 617;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.3e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:| | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPNHPLYPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 19
US-09-880-748-723
; Sequence 723, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 723
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-723

  Query Match             96.3%;  Score 617;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.3e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 20
US-09-880-748-743
; Sequence 743, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 743
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-743

  Query Match             96.3%;  Score 617;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.3e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 21
US-09-880-748-375
; Sequence 375, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
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;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 375
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-375

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 7.8e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHLPLTPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 22
US-09-880-748-399
; Sequence 399, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 399
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-399

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 7.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSILHPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 23
US-09-880-748-696
; Sequence 696, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 696
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-696

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 7.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHEPLFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 24
US-09-880-748-698
; Sequence 698, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 698
;   LENGTH: 249
;   TYPE: PRT
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;   ORGANISM: Homo sapiens
US-09-880-748-698

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 7.8e-52;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDSWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 25
US-09-880-748-709
; Sequence 709, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 709
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-709

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 7.8e-52;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 26
US-09-880-748-713
; Sequence 713, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 713
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-713

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 7.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||   | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLDPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 27
US-09-880-748-729
; Sequence 729, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 729
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-729

  Query Match             96.1%;  Score 616;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 7.8e-52;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
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Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDTWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 28
US-09-880-748-415
; Sequence 415, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 415
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-415

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLFFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 29
US-09-880-748-428
; Sequence 428, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 428
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-428

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 9.8e-52;
  Matches  118;  Conservative    2;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:| : |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPNHPMFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 30
US-09-880-748-644
; Sequence 644, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 644
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-644

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLHPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 31
US-09-880-748-655
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; Sequence 655, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 655
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-655

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||   | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSPLFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 32
US-09-880-748-722
; Sequence 722, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 722
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-722

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 9.8e-52;
  Matches  118;  Conservative    2;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||:|||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQRSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||: | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHYPLHPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 33
US-09-880-748-748
; Sequence 748, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 748
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-748

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLLFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 34
US-09-880-748-765
; Sequence 765, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
```

```
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 765
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-765

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLLFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 35
US-09-880-748-786
; Sequence 786, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 786
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-786

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 9.8e-52;
  Matches  118;  Conservative    0;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||    ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 36
US-09-880-748-789
; Sequence 789, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 789
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-789

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 9.8e-52;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||:|||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||| |  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLQFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 37
US-09-880-748-794
; Sequence 794, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 794
;   LENGTH: 249
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;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-794

  Query Match             95.9%;  Score 615;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 9.8e-52;
  Matches  118;  Conservative    0;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||    ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 38
US-09-880-748-322
; Sequence 322, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 322
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-322

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 39
US-09-880-748-329
; Sequence 329, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 329
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-329

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 40
US-09-880-748-433
; Sequence 433, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 433
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-433

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 1.2e-51;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
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Qy          61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               ||||||||||||||| |||||||||||||||||||||||||||| ||  ||||||||
Db          61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDALQSWGRGTMVT 120

Qy         121 VSS 123
               |||
Db         121 VSS 123


RESULT 41
US-09-880-748-461
; Sequence 461, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 461
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-461

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               |||||||||||||| |||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
               |||
Db        121 VSS 123


RESULT 42
US-09-880-748-574
; Sequence 574, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 574
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-574

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 1.2e-51;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               |||||||||||||| |||||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLYPWGRGTMVT 120

Qy        121 VSS 123
               |||
Db        121 VSS 123


RESULT 43
US-09-880-748-652
; Sequence 652, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 652
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-652

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               |||||||||||||| |||||||||||||||||||||||||||||  : |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPMDPWGRGTMVT 120

Qy        121 VSS 123
               |||
Db        121 VSS 123


RESULT 44
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US-09-880-748-717
; Sequence 717, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 717
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-717

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 1.2e-51;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 45
US-09-880-748-744
; Sequence 744, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 744
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-744

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 46
US-09-880-748-752
; Sequence 752, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 752
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-752

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
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Db        121 VSS 123


RESULT 47
US-09-880-748-766
; Sequence 766, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
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;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 766
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-766

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 1.2e-51;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
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Db         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLTFWGWGTMVT 120

Qy        121 VSS 123
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Db        121 VSS 123


RESULT 48
US-09-880-748-767
; Sequence 767, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 767
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-767

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 1.2e-51;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||||||||||||||||||||||||||||||||||| |: || |||||
Db         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLTFWGWGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 49
US-09-880-748-792
; Sequence 792, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 792
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-792

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
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Db        121 VSS 123


RESULT 50
US-09-880-748-797
; Sequence 797, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 797
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;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-797

  Query Match             95.8%;  Score 614;  DB 11;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 1.2e-51;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| ||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


Search completed: November 26, 2003, 13:49:51
Job time : 27.2821 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:37:50 ; Search time 15.2436 Seconds
(without alignments)
341.405 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	479	74.7	123	2	US-08-652-816A-8	Sequence 8, Appli
2	478	74.6	123	2	US-08-652-816A-1	Sequence 1, Appli
3	476	74.3	123	2	US-08-652-816A-9	Sequence 9, Appli
4	475.5	74.2	120	4	US-09-025-769B-35	Sequence 35, Appl
5	475.5	74.2	120	4	US-09-025-769B-57	Sequence 57, Appl
6	473	73.8	119	4	US-09-025-769B-21	Sequence 21, Appl
7	471	73.5	123	2	US-08-652-816A-6	Sequence 6, Appli
8	468	73.0	476	2	US-08-378-939-10	Sequence 10, Appl
9	460	71.8	123	2	US-08-652-816A-7	Sequence 7, Appli
10	451	70.4	120	2	US-08-428-197-12	Sequence 12, Appl
11	451	70.4	120	5	PCT-US93-10555-12	Sequence 12, Appl
12	443	69.1	119	3	US-08-983-607-50	Sequence 50, Appl
13	440	68.6	121	2	US-08-232-081B-41	Sequence 41, Appl
14	439.5	68.6	147	1	US-08-217-918-4	Sequence 4, Appli
15	438	68.3	120	2	US-08-428-197-13	Sequence 13, Appl
16	438	68.3	120	5	PCT-US93-10555-13	Sequence 13, Appl
17	422.5	65.9	128	4	US-08-635-109-3	Sequence 3, Appli
18	421	65.7	117	1	US-07-634-278-4	Sequence 4, Appli
19	421	65.7	117	1	US-07-634-278-15	Sequence 15, Appl
20	421	65.7	117	1	US-07-634-278-72	Sequence 72, Appl
21	421	65.7	117	1	US-07-634-278-104	Sequence 104, App
22	421	65.7	117	1	US-08-477-728-4	Sequence 4, Appli
23	421	65.7	117	1	US-08-477-728-15	Sequence 15, Appl
24	421	65.7	117	1	US-08-477-728-72	Sequence 72, Appl
25	421	65.7	117	1	US-08-477-728-104	Sequence 104, App
26	421	65.7	117	1	US-08-474-040-4	Sequence 4, Appli
27	421	65.7	117	1	US-08-474-040-15	Sequence 15, Appl
28	421	65.7	117	1	US-08-474-040-72	Sequence 72, Appl
29	421	65.7	117	1	US-08-474-040-104	Sequence 104, App
30	421	65.7	117	1	US-08-487-200-4	Sequence 4, Appli
31	421	65.7	117	1	US-08-487-200-15	Sequence 15, Appl
32	421	65.7	117	1	US-08-487-200-72	Sequence 72, Appl
33	421	65.7	117	1	US-08-487-200-104	Sequence 104, App
34	421	65.7	117	1	US-08-488-113B-166	Sequence 166, App
35	421	65.7	117	1	US-08-477-484B-166	Sequence 166, App
36	421	65.7	117	1	US-08-107-669D-52	Sequence 52, Appl
37	421	65.7	117	1	US-08-472-788A-52	Sequence 52, Appl
38	421	65.7	117	2	US-08-477-531B-52	Sequence 52, Appl
39	421	65.7	117	2	US-08-646-360-166	Sequence 166, App
40	421	65.7	117	2	US-08-082-842A-52	Sequence 52, Appl
41	421	65.7	117	3	US-08-839-765-166	Sequence 166, App
42	421	65.7	117	3	US-09-136-389-166	Sequence 166, App
43	421	65.7	117	3	US-08-484-537-4	Sequence 4, Appli
44	421	65.7	117	3	US-08-484-537-15	Sequence 15, Appl
45	421	65.7	117	3	US-08-484-537-72	Sequence 72, Appl

ALIGNMENTS

```
RESULT 1
US-08-652-816A-8
; Sequence 8, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9525004.9
;      FILING DATE:  07-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9610824.6
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/GB92/02240
;      FILING DATE:  02-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/244,597
;      FILING DATE:  01-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
```

```
;      NAME:  David W. Clough
;      REGISTRATION NUMBER:  36,107
;      REFERENCE/DOCKET NUMBER:  28111/33308
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-474-6300
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
US-08-652-816A-8

  Query Match             74.7%;  Score 479;  DB 2;  Length 123;
  Best Local Similarity   75.6%;  Pred. No. 3.5e-43;
  Matches   93;  Conservative   10;  Mismatches   20;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||:|: |||:||||||||||||| ||| |||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNSPINWLRQAPGQGLEWMGSIIPSFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||: ||||||| || ||||||||||||||||||        :: :  ||:|||||
Db         61 AQKFQGRLTITADESTSTAYMELSSLRSEDTAVYYCARHNHNYELYYYYMDVWGQGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 2
US-08-652-816A-1
; Sequence 1, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9525004.9
;      FILING DATE:  07-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9610824.6
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/GB92/02240
;      FILING DATE:  02-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/244,597
;      FILING DATE:  01-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  David W. Clough
;      REGISTRATION NUMBER:  36,107
;      REFERENCE/DOCKET NUMBER:  28111/33308
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-474-6300
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
US-08-652-816A-1

  Query Match             74.6%;  Score 478;  DB 2;  Length 123;
  Best Local Similarity   76.6%;  Pred. No. 4.5e-43;
  Matches   95;  Conservative   12;  Mismatches   15;  Indels    2;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||:|: |||:||||||||||||| ||| |||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNSPINWLRQAPGQGLEWMGSIIPSFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA-RSRDLLLFPHHALSPWGRGTMV 119
              :| ||||: ||||||| || |||||||||||||||| || :  |: :: :  ||:|||||
Db         61 AQKFQGRLTITADESTSTAYMELSSLRSEDTAVYYCAGRSHNYELY-YYYMDVWGQGTMV 119

Qy        120 TVSS 123
              ||||
Db        120 TVSS 123


RESULT 3
US-08-652-816A-9
; Sequence 9, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
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;       APPLICATION NUMBER:  GB 9525004.9
;       FILING DATE:  07-DEC-1995
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  GB 9610824.6
;       FILING DATE:  23-MAY-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/GB92/02240
;       FILING DATE:  02-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/244,597
;       FILING DATE:  01-JUN-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  David W. Clough
;       REGISTRATION NUMBER:  36,107
;       REFERENCE/DOCKET NUMBER:  28111/33308
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  312-474-6300
;   INFORMATION FOR SEQ ID NO:  9:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  123 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
US-08-652-816A-9

  Query Match             74.3%;  Score 476;  DB 2;  Length 123;
  Best Local Similarity   76.6%;  Pred. No. 7.3e-43;
  Matches   95;  Conservative   11;  Mismatches   16;  Indels    2;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||:|: |||:|||||||||||| ||| |||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNSPINWLRQAPGQGLEWMGSIIPSFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA-RSRDLLLFPHHALSPWGRGTMV 119
              :| |||||: ||||||| || |||||||||||||||| ||    |: :: :  ||:|||
Db         61 AQKFQGRLTITADESTSTAYMELSSLRSEDTAVYYCAGRSHTYELY-YYYMDVWGQGTMV 119

Qy        120 TVSS 123
              ||||
Db        120 TVSS 123


RESULT 4
US-09-025-769B-35
; Sequence 35, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11 3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  35:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-35

  Query Match             74.2%;  Score 475.5;  DB 4;  Length 120;
  Best Local Similarity   77.4%;  Pred. No. 8e-43;
  Matches   96;  Conservative   10;  Mismatches   13;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||:: ||:||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-SRDLLLFPHHALSPWGRGTMV 119
              :| ||||| ||||||| || |||||||||||||||||    |      :|:  ||:||:|
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARWGGD----GFYAMDYWGQGTLV 116

Qy        120 TVSS 123
              ||||
Db        117 TVSS 120


RESULT 5
US-09-025-769B-57
; Sequence 57, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11 3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  57:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
```

```
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-57

  Query Match             74.2%;  Score 475.5;  DB 4;  Length 120;
  Best Local Similarity   77.4%;  Pred. No. 8e-43;
  Matches   96;  Conservative   10;  Mismatches   13;  Indels    5;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCAR-SRDLLLFPHHALSPWGRGTMV 119
              :| ||||| ||||||| || ||||||||||||||||||    |      :|:  ||:||:|
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARWGGD----GFYAMDYWGQGTLV 116

Qy        120 TVSS 123
              ||||
Db        117 TVSS 120


RESULT 6
US-09-025-769B-21
; Sequence 21, Application US/09025769B
; Patent No. 6300064
;  GENERAL INFORMATION:
;    APPLICANT:  Knappik, Achim
;    APPLICANT:  Pack, Peter
;    APPLICANT:  Ilag, Vic
;    APPLICANT:  Ge, Liming
;    APPLICANT:  Moroney, Simon
;    APPLICANT:  Plueckthun, Andreas
;    TITLE OF INVENTION:  Protein/(Poly)peptide libraries
;    NUMBER OF SEQUENCES:  373
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  James F. Haley, Jr., Esq. c/o Fish & Neave
;      STREET:  1251 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10021
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/025,769B
;      FILING DATE:  18-FEB-1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  EP 95 11 3021.0
;      FILING DATE:  18-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  James F. Haley, Jr., Esq.
;      REGISTRATION NUMBER:  27,794
;      REFERENCE/DOCKET NUMBER:  MORPHO/5
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212)596-9000
;      TELEFAX:  (212)596-9090
;  INFORMATION FOR SEQ ID NO:  21:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  119 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-025-769B-21

  Query Match             73.8%;  Score 473;  DB 4;  Length 119;
  Best Local Similarity   76.0%;  Pred. No. 1.4e-42;
  Matches   95;  Conservative   10;  Mismatches   12;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:: ||:||||||||||||||||||:|||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHH--ALSPWGRGTM 118
              :| ||||| ||||||| || ||||||||||||||||||:      | :      ||:||:
Db         61 AQKFQGRVTITADESTSTAYMELSSLRSEDTAVYYCARA------PGYCSGFDYWGQGTL 114

Qy        119 VTVSS 123
              |||||
Db        115 VTVSS 119


RESULT 7
US-08-652-816A-6
; Sequence 6, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9525004.9
;      FILING DATE:  07-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9610824.6
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/GB92/02240
;      FILING DATE:  02-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/244,597
;      FILING DATE:  01-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  David W. Clough
;      REGISTRATION NUMBER:  36,107
;      REFERENCE/DOCKET NUMBER:  28111/33308
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-474-6300
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
```

```
US-08-652-816A-6

  Query Match             73.5%;  Score 471;  DB 2;  Length 123;
  Best Local Similarity   74.8%;  Pred. No. 2.4e-42;
  Matches   92;  Conservative   10;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||:|: |||:||||||||||||| ||| |||| |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNSPINWLRQAPGQGLEWMGSIIPSFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :| ||||: ||||||| || |||||||||||||||||          :: :  ||:|||||
Db         61 AQKFQGRLTITADESTSTAYMELSSLRSEDTAVYYCAGCSHNYELYYYYMDVWGQGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 8
US-08-378-939-10
; Sequence 10, Application US/08378939
; Patent No. 5876961
;  GENERAL INFORMATION:
;    APPLICANT:  CROWE, JAMES SCOTT
;    APPLICANT:  LEWIS, ALAN PETER
;    TITLE OF INVENTION:  PRODUCTION OF ANTIBODIES
;    NUMBER OF SEQUENCES:  46
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  ROTHWELL, FIGG, ERNST & KURZ
;      STREET:  555 THIRTEENTH ST. N.W.
;      CITY:  WASHINGTON
;      STATE:  D. C.
;      COUNTRY:  U.S.
;      ZIP:  20004
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/378,939
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/952640
;      FILING DATE:  01-DEC-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  ERNST, BARBARA G
;      REGISTRATION NUMBER:  30,377
;      REFERENCE/DOCKET NUMBER:  1808-118
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (202) 783-6040
;      TELEFAX:  (202) 783-6031
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  476 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-378-939-10

  Query Match             73.0%;  Score 468;  DB 2;  Length 476;
  Best Local Similarity   74.0%;  Pred. No. 2.5e-41;
  Matches   94;  Conservative    9;  Mismatches   20;  Indels    4;  Gaps    1;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |:|: |||||||||||| ||||||||||:| ||:|||||||||||||||||:|||  |
Db         20 QMQVVQSGAEVKKPGSSVTVSCKASGGTFSNYAISWVRQAPGQGLEWMGGIIPLFGTPTY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHA----LSPWGRG 116
              |||||||| ||||:|| || |||:|||||||||||||  |         |    |||:|
Db         80 SQNFQGRVTITADKSTSTAHMELTSLRSEDTAVYYCATDRYRQANFDRARVGWFDPWGQG 139

Qy        117 TMVTVSS 123
              |:|||||
Db        140 TLVTVSS 146


RESULT 9
US-08-652-816A-7
; Sequence 7, Application US/08652816A
; Patent No. 5872215
;  GENERAL INFORMATION:
;    APPLICANT:  Osbourn, JK
;    APPLICANT:  Allen, DJ
;    APPLICANT:  McCafferty, JG
;    TITLE OF INVENTION:  Specific binding members, materials and
;    TITLE OF INVENTION:  methods.
;    NUMBER OF SEQUENCES:  53
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 South Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/652,816A
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.4
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9125579.8
;      FILING DATE:  02-DEC-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206318.9
;      FILING DATE:  24-MAR-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9206372.6
;      FILING DATE:  23-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9525004.9
;      FILING DATE:  07-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  GB 9610824.6
;      FILING DATE:  23-MAY-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/GB92/02240
;      FILING DATE:  02-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/244,597
;      FILING DATE:  01-JUN-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  David W. Clough
;      REGISTRATION NUMBER:  36,107
;      REFERENCE/DOCKET NUMBER:  28111/33308
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-474-6300
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
US-08-652-816A-7

  Query Match             71.8%;  Score 460;  DB 2;  Length 123;
  Best Local Similarity   74.0%;  Pred. No. 3.5e-41;
  Matches   91;  Conservative   11;  Mismatches   21;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
```

```
                ||||  |||||||||||||:||||||||||:|: |||:||||||||||||  ||| ||||  |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNSPINWLRQAPGQGLEWMGSIIPSFGTANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
               :| ||||: |||||||  || ||||||||||||||||  :       :: :   |:|||||
Db         61 AQKFQGRLTITADESTSTAYMELSSLRSEDTAVYYCAGANSCNRSYYYYMDVRGQGTMVT 120

Qy        121 VSS 123
               |||
Db        121 VSS 123


RESULT 10
US-08-428-197-12
; Sequence 12, Application US/08428197
; Patent No. 5891438
;  GENERAL INFORMATION:
;    APPLICANT:  SILVERMAN, GREGG J.
;    TITLE OF INVENTION:  METHOD FOR STIMULATING PRODUCTION OF
;    TITLE OF INVENTION:  VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH
;    TITLE OF INVENTION:  VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  51
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East - Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/428,197
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10555
;      FILING DATE:  29-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Howells, Stacy L.
;      REGISTRATION NUMBER:  34,842
;      REFERENCE/DOCKET NUMBER:  FD-2630
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 455-5100
;      TELEFAX:  (619) 455-5110
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    IMMEDIATE SOURCE:
;      CLONE:  BOR
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..120
US-08-428-197-12

  Query Match             70.4%;  Score 451;  DB 2;  Length 120;
  Best Local Similarity   71.2%;  Pred. No. 3e-40;
  Matches   89;  Conservative   15;  Mismatches   13;  Indels    8;  Gaps    2;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||| |||||||||||||:|:||||| ||:::||:||||||||||||||||||:|||   |:
Db          1 VQLVQSGAEVKKPGSSVKVTCKASGDTFSSSAISWVRQAPGQGLEWMGGIIPIFGTPNYA 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP---WGRGTM 118
              | ||||| || |||| || ||:|||||||||:|||||    :     |::|   ||:||:
Db         61 QKFQGRVTITTDESTSTAYMEVSSLRSEDTALYYCAREGRRM-----AINPFDYWGQGTL 115

Qy        119 VTVSS 123
               |||||
Db        116 VTVSS 120


RESULT 11
PCT-US93-10555-12
; Sequence 12, Application PC/TUS9310555
;  GENERAL INFORMATION:
;    APPLICANT:  SILVERMAN, GREGG J.
;    TITLE OF INVENTION:  METHOD FOR STIMULATING PRODUCTION OF
;    TITLE OF INVENTION:  VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH
;    TITLE OF INVENTION:  VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  51
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East - Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10555
;      FILING DATE:  29-OCT-1993
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Howells, Stacy L.
;      REGISTRATION NUMBER:  34,842
;      REFERENCE/DOCKET NUMBER:  FD-2630
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 455-5100
;      TELEFAX:  (619) 455-5110
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    IMMEDIATE SOURCE:
;      CLONE:  BOR
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..120
PCT-US93-10555-12

  Query Match             70.4%;  Score 451;  DB 5;  Length 120;
  Best Local Similarity   71.2%;  Pred. No. 3e-40;
  Matches   89;  Conservative   15;  Mismatches   13;  Indels    8;  Gaps    2;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              ||| |||||||||||||:|:||||| ||:::||:||||||||||||||||||:|||   |:
Db          1 VQLVQSGAEVKKPGSSVKVTCKASGDTFSSSAISWVRQAPGQGLEWMGGIIPIFGTPNYA 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP---WGRGTM 118
              | ||||| || |||| || ||:|||||||||:|||||    :     |::|   ||:||:
Db         61 QKFQGRVTITTDESTSTAYMEVSSLRSEDTALYYCAREGRRM-----AINPFDYWGQGTL 115

Qy        119 VTVSS 123
               |||||
Db        116 VTVSS 120


RESULT 12
US-08-983-607-50
```

```
; Sequence 50, Application US/08983607
; Patent No. 6140470
;  GENERAL INFORMATION:
;    APPLICANT:  Alan Garen
;    APPLICANT:  Xiaohong Cai
;    TITLE OF INVENTION:  Human Anti-Tumor Monoclonal Anti-
;    TITLE OF INVENTION:  bodies
;    NUMBER OF SEQUENCES:  51
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Department of Molecular Biophysics
;      ADDRESSEE:  and Biochemistry, Yale University
;      STREET:  266 Whitney Avenue
;      CITY:  New Haven
;      STATE:  Connecticut
;      COUNTRY:  United States of America
;      ZIP:  06520-8114
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" 1.44 Mb diskette
;      COMPUTER:  IBM PC
;      OPERATING SYSTEM:  MS DOS
;      SOFTWARE:  Word Processing
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/983,607
;      FILING DATE:  April 27, 1998
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/IB96/01032
;      FILING DATE:  June 28, 1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Mary M. Krinsky
;      REGISTRATION NUMBER:  32423
;      REFERENCE/DOCKET NUMBER:  OCR-679
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  203-773-9544
;      TELEFAX:  203-773-1183
;  INFORMATION FOR SEQ ID NO:  50:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  119 residues
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:
;      DESCRIPTION:  polypeptide
;    ORIGINAL SOURCE:
;      ORGANISM:  Homo sapiens (melanoma patient
;      ORGANISM:  immunized with autologous tumor cells)
;      INDIVIDUAL ISOLATE:  peripheral blood lympho-
;      INDIVIDUAL ISOLATE:  cytes
;    IMMEDIATE SOURCE:
;      LIBRARY:  VH antibodies obtained from fUSE5
;      LIBRARY:  fusion phage construct
;      CLONE:  2-71
;    FEATURE:
;      NAME/KEY:  heavy chain
US-08-983-607-50

  Query Match             69.1%;  Score 443;  DB 3;  Length 119;
  Best Local Similarity   75.0%;  Pred. No. 2.1e-39;
  Matches   87;  Conservative   10;  Mismatches   15;  Indels    4;  Gaps    1;

Qy          8 GAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYSQNFQGR 67
              | |||||||||:||||||||||:: ||:||||||||||||||||||:|||| |:| ||||
Db          8 GLEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTANYAQKFQGR 67

Qy         68 VAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVTVSS 123
                 |||||:|| || |||||||||||||||||        : |    ||:||:|||||
Db         68 VTITADKSTSTAYMELSSLRSEDTAVYYCARGGG----RYDAFDIWGQGTLVTVSS 119


RESULT 13
US-08-232-081B-41
; Sequence 41, Application US/08232081B
; Patent No. 5886152
;  GENERAL INFORMATION:
;    APPLICANT:  NAKATANI, TOMOYUKI
;    APPLICANT:  GOMI, HIDEYUKI
;    APPLICANT:  WIJDENES, JOHN
;    APPLICANT:  NOGUCHI, HIROSHI
;    TITLE OF INVENTION:  HUMANIZED B-B10
;    NUMBER OF SEQUENCES:  42
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  BIRCH, STEWART, KOLASCH AND BIRCH
;      STREET:  PO BOX 747
;      CITY:  FALLS CHURCH
;      STATE:  VA
;      COUNTRY:  USA
;      ZIP:  22040-0747
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/232,081B
;      FILING DATE:
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  SVENSSON, LEONARD R
;      REGISTRATION NUMBER:  30,330
;      REFERENCE/DOCKET NUMBER:  20-3484
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (703) 205-8000
;      TELEFAX:  (703) 205-8050
;  INFORMATION FOR SEQ ID NO:  41:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  121 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-232-081B-41

  Query Match             68.6%;  Score 440;  DB 2;  Length 121;
  Best Local Similarity   67.9%;  Pred. No. 4.3e-39;
  Matches   89;  Conservative   11;  Mismatches   13;  Indels   18;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              :| | |||||||||||||:||||||||:: ||:||||||||||||||||||:|| | |
Db          1 EVHLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGQANY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA--------RSRDLLLFPHHALSP 112
              :| ||||| ||||||| || ||| |||||:|||:||||        |  |
Db         61 AQKFQGRVTITADESTNTAYMELRSLRSDDTAMYYCAKEGYGDYGRPFDF---------- 110

Qy        113 WGRGTMVTVSS 123
              ||:||:|||||
Db        111 WGQGTLVTVSS 121


RESULT 14
US-08-217-918-4
; Sequence 4, Application US/08217918
; Patent No. 5506132
;  GENERAL INFORMATION:
;    APPLICANT:  LAKE, PHILIP
;    APPLICANT:  OSTBERG, LARS
;    TITLE OF INVENTION:  HUMAN ANTIBODIES AGAINST
;    TITLE OF INVENTION:  VARICELLA-ZOSTER VIRUS
;    NUMBER OF SEQUENCES:  4
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
```

```
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/217,918
;      FILING DATE:  24-MAR-1994
;      CLASSIFICATION:  530
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, Willaim M
;      REGISTRATION NUMBER:  30,223
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  147 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-217-918-4

  Query Match             68.6%;  Score 439.5;  DB 1;  Length 147;
  Best Local Similarity   68.7%;  Pred. No. 6.2e-39;
  Matches   90;  Conservative   13;  Mismatches   17;  Indels   11;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||:| ||:|||||||||||||| |:|:| |: |
Db         20 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSNFAISWVRQAPGQGLEWMGRIMPLFVTSTY 79

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSP-------- 112
              :| ||||| |:|| || || |||||||||:|||:|||||    :  |  | :|
Db         80 AQKFQGRVTISADASTSTAYMELSSLRSDDTAMYYCARD---ITAPGAAPTPLNFYGMDV 136

Qy        113 WGRGTMVTVSS 123
              ||:|| |||||
Db        137 WGQGTTVTVSS 147


RESULT 15
US-08-428-197-13
; Sequence 13, Application US/08428197
; Patent No. 5891438
;  GENERAL INFORMATION:
;    APPLICANT:  SILVERMAN, GREGG J.
;    TITLE OF INVENTION:  METHOD FOR STIMULATING PRODUCTION OF
;    TITLE OF INVENTION:  VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH
;    TITLE OF INVENTION:  VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  51
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East - Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/428,197
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10555
;      FILING DATE:  29-OCT-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Howells, Stacy L.
;      REGISTRATION NUMBER:  34,842
;      REFERENCE/DOCKET NUMBER:  FD-2630
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 455-5100
;      TELEFAX:  (619) 455-5110
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    IMMEDIATE SOURCE:
;      CLONE:  KAS
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..120
US-08-428-197-13

  Query Match             68.3%;  Score 438;  DB 2;  Length 120;
  Best Local Similarity   68.5%;  Pred. No. 7e-39;
  Matches   89;  Conservative   10;  Mismatches   13;  Indels   18;  Gaps    2;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              | | |||||||||||||:||||||||:: ||:||||||||||||||||||:|| | |:
Db          1 VHLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGQANYA 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA--------RSRDLLLFPHHALSPW 113
              | ||||| ||||||| || ||| ||||:|||:||||        |  |           |
Db         61 QKFQGRVTITADESTNTAYMELRSLRSDDTAMYYCAKEGYGDYGRPFDF----------W 110

Qy        114 GRGTMVTVSS 123
              |:||:|||||
Db        111 GQGTLVTVSS 120


RESULT 16
PCT-US93-10555-13
; Sequence 13, Application PC/TUS9310555
;  GENERAL INFORMATION:
;    APPLICANT:  SILVERMAN, GREGG J.
;    TITLE OF INVENTION:  METHOD FOR STIMULATING PRODUCTION OF
;    TITLE OF INVENTION:  VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH
;    TITLE OF INVENTION:  VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  51
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Spensley Horn Jubas & Lubitz
;      STREET:  1880 Century Park East - Suite 500
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  90067
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/10555
;      FILING DATE:  29-OCT-1993
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Howells, Stacy L.
;      REGISTRATION NUMBER:  34,842
;      REFERENCE/DOCKET NUMBER:  FD-2630
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (619) 455-5100
;      TELEFAX:  (619) 455-5110
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  120 amino acids
;      TYPE:  amino acid
```

```
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    IMMEDIATE SOURCE:
;      CLONE:  KAS
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..120
PCT-US93-10555-13

  Query Match             68.3%;  Score 438;  DB 5;  Length 120;
  Best Local Similarity   68.5%;  Pred. No. 7e-39;
  Matches   89;  Conservative   10;  Mismatches   13;  Indels   18;  Gaps    2;

Qy          2 VQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKYS 61
              | | |||||||||||||:||||||||:: ||:||||||||||||||||:|| | |:
Db          1 VHLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGQANYA 60

Qy         62 QNFQGRVAITADESTGTASMELSSLRSEDTAVYYCA--------RSRDLLLFPHHALSPW 113
              | ||||| ||||||| || ||| |||:|||:||||        |  |           |
Db         61 QKFQGRVTITADESTNTAYMELRSLRSDDTAMYYCAKEGYGDYGRPFDF----------W 110

Qy        114 GRGTMVTVSS 123
              |:||:||||| .
Db        111 GQGTLVTVSS 120


RESULT 17
US-08-635-109-3
; Sequence 3, Application US/08635109
; Patent No. 6538114
;  GENERAL INFORMATION:
;    APPLICANT:  Persson, Mats A. A.
;    APPLICANT:  Allander, Tobias E.
;    TITLE OF INVENTION:  HUMAN MONOCLONAL ANTIBODIES SPECIFIC FOR
;    TITLE OF INVENTION:  HEPATITIS C VIRUS (HCV) E2 ANTIGEN
;    NUMBER OF SEQUENCES:  23
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  REED & ROBINS
;      STREET:  285 Hamilton Avenue, Suite 200
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/635,109
;      FILING DATE:  19-APR-1996
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McCracken, Thomas P
;      REGISTRATION NUMBER:  38,548
;      REFERENCE/DOCKET NUMBER:  2300-6146
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 327-3400
;      TELEFAX:  (415) 327-3231
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  128 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-635-109-3

  Query Match             65.9%;  Score 422.5;  DB 4;  Length 128;
  Best Local Similarity   66.7%;  Pred. No. 3.2e-37;
  Matches   86;  Conservative   14;  Mismatches   22;  Indels    7;  Gaps    3;

Qy          1 QVQ-LQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAK 59
              :|| |:||||||||||:|||||||||: : |:||||||||||||| |  |||:
Db          1 EVQLLEQSGAEVKKPGSSVKVSCKASGGTFSGHVISWVRQAPGQGLEWMGGSISFFGTSN 60

Qy         60 YSQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLL-----LFPHHALSPWG 114
              :| |||||:||||||  || |||||||||||:||||:           :|      ||
Db         61 SAQKFQGRVSITADESASTAYMELSSLRSEDTAIYYCAKDPPRFCSGGNCYPGF-FQQWG 119

Qy        115 RGTMVTVSS 123
              :||:|||||
Db        120 QGTLVTVSS 128


RESULT 18
US-07-634-278-4
; Sequence 4, Application US/07634278
; Patent No. 5530101
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Variable region of the human
;      OTHER INFORMATION:  Eu antibody heavy chain."
US-07-634-278-4
```

```
  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 19
US-07-634-278-15
; Sequence 15, Application US/07634278
; Patent No. 5530101
; GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Eu heavy chain amino acid
;      OTHER INFORMATION:  sequence."
US-07-634-278-15

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 20
US-07-634-278-72
; Sequence 72, Application US/07634278
; Patent No. 5530101
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  72:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
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US-07-634-278-72

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
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Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
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Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 21
US-07-634-278-104
; Sequence 104, Application US/07634278
; Patent No. 5530101
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  104:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-07-634-278-104

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||| :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :    ||     | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 22
US-08-477-728-4
; Sequence 4, Application US/08477728
; Patent No. 5585089
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, 8th Floor
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,728
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
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;      OTHER INFORMATION:  /note= "Variable region of the human
;      OTHER INFORMATION:  Eu antibody heavy chain."
US-08-477-728-4

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 23
US-08-477-728-15
; Sequence 15, Application US/08477728
; Patent No. 5585089
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, 8th Floor
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,728
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Eu heavy chain amino acid
;      OTHER INFORMATION:  sequence."
US-08-477-728-15

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 24
US-08-477-728-72
; Sequence 72, Application US/08477728
; Patent No. 5585089
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, 8th Floor
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,728
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  72:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
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;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-477-728-72

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || ||||||||||| |:||         :    ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 25
US-08-477-728-104
; Sequence 104, Application US/08477728
; Patent No. 5585089
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew LLP
;      STREET:  Two Embarcadero Center, 8th Floor
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,728
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  104:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-477-728-104

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || ||||||||||| |:||         :    ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 26
US-08-474-040-4
; Sequence 4, Application US/08474040
; Patent No. 5693761
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/474,040
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
```

```
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Variable region of the human
;      OTHER INFORMATION:  Eu antibody heavy chain."
US-08-474-040-4

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || ||||||||||| |:||         :   ||     | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 27
US-08-474-040-15
; Sequence 15, Application US/08474040
; Patent No. 5693761
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/474,040
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Eu heavy chain amino acid
;      OTHER INFORMATION:  sequence."
US-08-474-040-15

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || ||||||||||| |:||         :   ||     | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 28
US-08-474-040-72
; Sequence 72, Application US/08474040
; Patent No. 5693761
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/474,040
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
```

```
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  72:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-474-040-72

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 29
US-08-474-040-104
; Sequence 104, Application US/08474040
; Patent No. 5693761
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/474,040
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  536
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
```

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;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  104:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-474-040-104

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 30
US-08-487-200-4
; Sequence 4, Application US/08487200
; Patent No. 5693762
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/487,200
;      FILING DATE:  7-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
```

```
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002610
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Variable region of the human
;      OTHER INFORMATION:  Eu antibody heavy chain."
[redacted]8-487-200-4

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||| :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||     :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 31
US-08-487-200-15
; Sequence 15, Application US/08487200
; Patent No. 5693762
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/487,200
;      FILING DATE:  7-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M.
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002610
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Eu heavy chain amino acid
;      OTHER INFORMATION:  sequence."
US-08-487-200-15

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||| :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||     :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 32
US-08-487-200-72
; Sequence 72, Application US/08487200
; Patent No. 5693762
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      APPLICATION NUMBER:  US/08/487,200
;      FILING DATE:  7-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002610
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  72:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-487-200-72

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 33
US-08-487-200-104
; Sequence 104, Application US/08487200
; Patent No. 5693762
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/487,200
;      FILING DATE:  7-JUN-1995
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/634,278
;      FILING DATE:  19-DEC-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002610
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  104:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-487-200-104

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 34
US-08-488-113B-166
; Sequence 166, Application US/08488113B
; Patent No. 5744580
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
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;      APPLICATION NUMBER:  US/08/488,113B
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US07/200-70.P3.C2A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-488-113B-166

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||| :|| ||||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 35
US-08-477-484B-166
; Sequence 166, Application US/08477484B
; Patent No. 5756699
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/477,484B
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US07/200-70.P3.C2A
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-477-484B-166

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||| :|| ||||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 36
US-08-107-669D-52
; Sequence 52, Application US/08107669D
; Patent No. 5766886
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains (as amended)
;    NUMBER OF SEQUENCES:  67
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  United States of America
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
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;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/107,669D
;       FILING DATE:  13-AUG-1993
;       CLASSIFICATION:  424
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US92/10906
;       FILING DATE:  14-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/808,464
;       FILING DATE:  13-DEC-1991
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Michele A. Cimbala
;       REGISTRATION NUMBER:  33,851
;       REFERENCE/DOCKET NUMBER:  0610.1000001/MAC
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  202/371-2600
;       TELEFAX:  202/371-2540
;     INFORMATION FOR SEQ ID NO:  52:
;       SEQUENCE CHARACTERISTICS:
;       LENGTH:  117 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-107-669D-52

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :    ||     | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 37
US-08-472-788A-52
; Sequence 52, Application US/08472788A
; Patent No. 5770196
; GENERAL INFORMATION:
;     APPLICANT:  Studnicka, Gary M.
;     TITLE OF INVENTION:  Modified Antibody Variable Domains
;     NUMBER OF SEQUENCES:  89
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;       STREET:  1100 New York Ave., N.W., Suite 600
;       CITY:  Washington
;       STATE:  D.C.
;       COUNTRY:  USA
;       ZIP:  20005-3934
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/472,788A
;       FILING DATE:  07-JUN-1995
;       CLASSIFICATION:  424
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/082,842
;       FILING DATE:  23-JUN-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US92/10906
;       FILING DATE:  14-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/808,464
;       FILING DATE:  13-DEC-1991
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Cimbala, Michele A.
;       REGISTRATION NUMBER:  33,851
;       REFERENCE/DOCKET NUMBER:  0610.1000003
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  202/371-2600
;       TELEFAX:  202/371-2540
;       TELEX:
;   INFORMATION FOR SEQ ID NO:  52:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  117 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-472-788A-52

  Query Match             65.7%;  Score 421;  DB 1;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :    ||     | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 38
US-08-477-531B-52
; Sequence 52, Application US/08477531B
; Patent No. 5821123
; GENERAL INFORMATION:
;     APPLICANT:  Studnicka, Gary M.
;     TITLE OF INVENTION:  Modified Antibody Variable Domains (as amended)
;     NUMBER OF SEQUENCES:  67
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;       STREET:  1100 New York Ave., N.W., Suite 600
;       CITY:  Washington
;       STATE:  D.C.
;       COUNTRY:  United States of America
;       ZIP:  20005-3934
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/477,531B
;       FILING DATE:  07-JUN-1995
;       CLASSIFICATION:  436
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  08/107,669
;       FILING DATE:  13-AUG-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/US92/10906
;       FILING DATE:  14-DEC-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 07/808,464
;       FILING DATE:  13-DEC-1991
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Michele A. Cimbala
;       REGISTRATION NUMBER:  33,851
```

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;      REFERENCE/DOCKET NUMBER:  0610.1000004/MAC
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-477-531B-52

  Query Match             65.7%;  Score 421;  DB 2;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 39
US-08-646-360-166
; Sequence 166, Application US/08646360
; Patent No. 5837491
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  173
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/646,360
;      FILING DATE:  13-MAY-1996
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US94/05348
;      FILING DATE:  12-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  200-70.P4
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-646-360-166

  Query Match             65.7%;  Score 421;  DB 2;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 40
US-08-082-842A-52
; Sequence 52, Application US/08082842A
; Patent No. 5869619
;  GENERAL INFORMATION:
;    APPLICANT:  Studnicka, Gary M.
;    TITLE OF INVENTION:  Modified Antibody Variable Domains
;    NUMBER OF SEQUENCES:  89
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Sterne, Kessler, Goldstein and Fox P.L.L.C.
;      STREET:  1100 New York Ave., N.W., Suite 600
;      CITY:  Washington
;      STATE:  D.C.
;      COUNTRY:  USA
;      ZIP:  20005-3934
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/082,842A
;      FILING DATE:  23-JUN-1993
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/10906
;      FILING DATE:  14-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/808,464
;      FILING DATE:  13-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cimbala, Michele A.
;      REGISTRATION NUMBER:  33,851
;      REFERENCE/DOCKET NUMBER:  0610.1000002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202/371-2600
;      TELEFAX:  202/371-2540
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  52:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
```

```
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-082-842A-52

  Query Match             65.7%;  Score 421;  DB 2;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||| :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 41
US-08-839-765-166
; Sequence 166, Application US/08839765
; Patent No. 6146631
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  169
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/839,765
;      FILING DATE:  15-APR-1997
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/425,336
;      FILING DATE:  18-APR-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  11022US09/200-70.P3.C3
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-839-765-166

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||| :|| |||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 42
US-09-136-389-166
; Sequence 166, Application US/09136389
; Patent No. 6146850
;  GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  173
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/136,389
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/646,360
;      FILING DATE:  13-MAY-1996
;      APPLICATION NUMBER:  PCT/US94/05348
;      FILING DATE:  12-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  200-70.P4
```

```
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-136-389-166

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 43
US-08-484-537-4
; Sequence 4, Application US/08484537
; Patent No. 6180370
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/484,537
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Variable region of the human
;      OTHER INFORMATION:  Eu antibody heavy chain."
US-08-484-537-4

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 44
US-08-484-537-15
; Sequence 15, Application US/08484537
; Patent No. 6180370
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/484,537
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
```

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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  15:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  unknown
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..117
;      OTHER INFORMATION:  /note= "Eu heavy chain amino acid
;      OTHER INFORMATION:  sequence."
US-08-484-537-15

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 45
US-08-484-537-72
; Sequence 72, Application US/08484537
; Patent No. 6180370
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/484,537
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  72:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-484-537-72

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 46
US-08-484-537-104
; Sequence 104, Application US/08484537
; Patent No. 6180370
;  GENERAL INFORMATION:
;    APPLICANT:  QUEEN, Cary L.
;    APPLICANT:  CO, Man Sung
;    APPLICANT:  SCHNEIDER, William P.
;    APPLICANT:  LANDOLFI, Nicholas F.
;    APPLICANT:  COELINGH, Kathleen L.
;    APPLICANT:  SELICK, Harold E.
;    TITLE OF INVENTION:  IMPROVED HUMANIZED IMMUNOGLOBLINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Townsend and Townsend Khourie and Crew
;      STREET:  379 Lytton Avenue
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  US
;      ZIP:  94301
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/484,537
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/634,278
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;      FILING DATE:  19-DEC-1990
;      APPLICATION NUMBER:  US 07/590,274
;      FILING DATE:  28-SEP-1990
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/310,252
;      FILING DATE:  13-FEB-1989
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/290,975
;      FILING DATE:  28-DEC-1988
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Smith, William M
;      REGISTRATION NUMBER:  30,223
;      REFERENCE/DOCKET NUMBER:  11823-002600
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 326-2400
;      TELEFAX:  (415) 326-2422
;  INFORMATION FOR SEQ ID NO:  104:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
US-08-484-537-104

  Query Match             65.7%;  Score 421;  DB 3;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 47
US-09-450-520A-13
; Sequence 13, Application US/09450520A
; Patent No. 6329511
; GENERAL INFORMATION:
;  APPLICANT: Vasquez, Maximiliano
;  APPLICANT:  Landolfi, Nicholas F.
;  APPLICANT:  Tsurushita, Naoya
;  APPLICANT:  Queen, Cary L.
;  APPLICANT:  Protein Design Labs, Inc.
;  TITLE OF INVENTION: Humanized Antibodies To Gamma-Interferon
;  FILE REFERENCE: 011823-008110US
;  CURRENT APPLICATION NUMBER: US/09/450,520A
;  CURRENT FILING DATE:  1999-11-29
;  PRIOR APPLICATION NUMBER: 60/110,523
;  PRIOR FILING DATE: 1998-12-01
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
;   LENGTH: 117
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   OTHER INFORMATION: Variable region of the human Eu antibody heavy
;   OTHER INFORMATION: chain.
US-09-450-520A-13

  Query Match             65.7%;  Score 421;  DB 4;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:||||||||||: :|| |||||||||||||||||:||||   |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||        :   ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 48
US-09-610-838-166
; Sequence 166, Application US/09610838
; Patent No. 6376217
; GENERAL INFORMATION:
;    APPLICANT:  Better, Marc D.
;    APPLICANT:  Carroll, Stephen F.
;    APPLICANT:  Studnika, Gary M.
;    TITLE OF INVENTION:  Immunotoxins Comprising Ribosome-Inactivating
;    TITLE OF INVENTION:  Proteins
;    NUMBER OF SEQUENCES:  173
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  McAndrews, Held & Malloy, Ltd.
;      STREET:  500 West Madison Street, 34th floor
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60661
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/610,838
;      FILING DATE:  06-JUL-2000
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/136,389
;      FILING DATE:  18-AUG-1998
;      APPLICATION NUMBER:  08/646,360
;      FILING DATE:  13-MAY-1996
;      APPLICATION NUMBER:  PCT/US94/05348
;      FILING DATE:  12-MAY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/064,691
;      FILING DATE:  12-MAY-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/988,430
;      FILING DATE:  09-DEC-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/901,707
;      FILING DATE:  19-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/787,567
;      FILING DATE:  04-NOV-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McNicholas, Janet M.
;      REGISTRATION NUMBER:  32,918
;      REFERENCE/DOCKET NUMBER:  200-70.P4
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312/707-8889
;      TELEFAX:  312/707-9155
;      TELEX:  650 388-1248
;  INFORMATION FOR SEQ ID NO:  166:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  117 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  No. 6376217 Relevant
;      TOPOLOGY:  linear
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;    MOLECULE TYPE:  protein
US-09-610-838-166

  Query Match             65.7%;  Score 421;  DB 4;  Length 117;
  Best Local Similarity   71.0%;  Pred. No. 4.2e-37;
  Matches   88;  Conservative    8;  Mismatches   20;  Indels    8;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||||:|||||||||: :|| |||||||||||||||:||||    |
Db          1 QVQLVQSGAEVKKPGSSVKVSCKASGGTFSRSAIIWVRQAPGQGLEWMGGIVPMFGPPNY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWG-RGTMV 119
              :| ||||| ||||||| || |||||||||||| |:||         :    ||    | :|
Db         61 AQKFQGRVTITADESTNTAYMELSSLRSEDTAFYFCAGG-------YGIYSPEEYNGGLV 113

Qy        120 TVSS 123
              ||||
Db        114 TVSS 117


RESULT 49
US-08-482-882-53
; Sequence 53, Application US/08482882
; Patent No. 5773218
;  GENERAL INFORMATION:
;    APPLICANT:  Gallatin, W. Michael
;    APPLICANT:  Vazeux, Rosemay
;    TITLE OF INVENTION:  ICAM-Related Materials and Methods
;    NUMBER OF SEQUENCES:  116
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  6300 Sears Tower, 233 S. Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/482,882
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/286,754
;      FILING DATE:
;      APPLICATION NUMBER:  US 08/102,852
;      FILING DATE:  05-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/009,266
;      FILING DATE:  22-JAN-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/894,061
;      FILING DATE:  05-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/889,724
;      FILING DATE:  26-MAY-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/827,689
;      FILING DATE:  27-JAN-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  No. 5773218and, Greta E.
;      REGISTRATION NUMBER:  35,302
;      REFERENCE/DOCKET NUMBER:  32178
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (312) 474-6300
;      TELEFAX:  (312) 474-0448
;      TELEX:  25-3856
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-482-882-53

  Query Match             65.4%;  Score 419;  DB 1;  Length 123;
  Best Local Similarity   70.7%;  Pred. No. 7.2e-37;
  Matches   87;  Conservative    9;  Mismatches   23;  Indels    4;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||||:||:|||||| || :  | |||||||||||||| | | |||  |
Db          5 QVQLVQSGAEVKKPGASVKVSCKASGYTFTDCIILWVRQAPGQGLEWMGKINPYFGTTTY 64

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :  |:||| |||| || || ||||||||||||||||||      :|  |:  ||:||:||
Db         65 NLKFKGRVTITADTSTSTAYMELSSLRSEDTAVYYCARKE---AYP-DAMDYWGQGTLVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 50
US-08-483-389-53
; Sequence 53, Application US/08483389
; Patent No. 5811517
;  GENERAL INFORMATION:
;    APPLICANT:  Gallatin, W. Michael
;    APPLICANT:  Vazeux, Rosemay
;    TITLE OF INVENTION:  ICAM-RELATED PROTEIN
;    NUMBER OF SEQUENCES:  118
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Marshall, O'Toole, Gerstein, Murray & Borun
;      STREET:  233 South Wacker Drive/6300 Sears Tower
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  United States of America
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/483,389
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/102,852
;      FILING DATE:  05-AUG-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/009,266
;      FILING DATE:  22-JAN-1993
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/894,061
;      FILING DATE:  05-JUN-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/889,724
;      FILING DATE:  26-MAY-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 07/827,689
;      FILING DATE:  27-JAN-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Suh, Young J.
;      REGISTRATION NUMBER:  P-41,337
;      REFERENCE/DOCKET NUMBER:  27866/32760
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (312) 474-6300
;      TELEFAX:  (312) 474-0448
;      TELEX:  (312) 474-6600
;  INFORMATION FOR SEQ ID NO:  53:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  123 amino acids
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;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-483-389-53

  Query Match             65.4%;  Score 419;  DB 2;  Length 123;
  Best Local Similarity   70.7%;  Pred. No. 7.2e-37;
  Matches   87;  Conservative    9;  Mismatches   23;  Indels    4;  Gaps    2;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              |||| |||||||||:||:||||||| || :  | ||||||||||||| | | |||  |
Db          5 QVQLVQSGAEVKKPGASVKVSCKASGYTFTDCIILWVRQAPGQGLEWMGKINPYFGTTTY 64

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              :  |:||| |||| || || |||||||||||||||||.     :|  |:  ||:||:||
Db         65 NLKFKGRVTITADTSTSTAYMELSSLRSEDTAVYYCARKE---AYP-DAMDYWGQGTLVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


Search completed: November 26, 2003, 13:42:23
Job time : 16.2436 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:29:34 ; Search time 39.4231 Seconds
(without alignments)
495.227 Million cell updates/sec

Title: US-09-880-748-327_COPY_1_123
Perfect score: 641
Sequence: 1 QVQLQQSGAEVKKPGSSVRV.....LFPHHALSPWGRGTMVTVSS 123

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_19Jun03:*
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2: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
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21: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*
22: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*
24: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2003.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	641	100.0	249	23	ABP44316	Human BLyS binding
2	626	97.7	249	23	ABP44774	Human BLyS binding
3	622	97.0	249	23	ABP44516	Human BLyS binding
4	622	97.0	249	23	ABP44673	Human BLyS binding
5	622	97.0	249	23	ABP44793	Human BLyS binding
6	621	96.9	249	23	ABP44649	Human BLyS binding
7	620	96.7	249	23	ABP44333	Human BLyS binding
8	620	96.7	249	23	ABP44352	Human BLyS binding
9	620	96.7	249	23	ABP44653	Human BLyS binding
10	619	96.6	249	23	ABP44579	Human BLyS binding
11	619	96.6	249	23	ABP44810	Human BLyS binding
12	618	96.4	249	23	ABP44313	Human BLyS binding
13	618	96.4	249	23	ABP44314	Human BLyS binding
14	618	96.4	249	23	ABP44585	Human BLyS binding
15	618	96.4	249	23	ABP44690	Human BLyS binding
16	617	96.3	249	23	ABP44355	Human BLyS binding
17	617	96.3	249	23	ABP44393	Human BLyS binding
18	617	96.3	249	23	ABP44475	Human BLyS binding
19	617	96.3	249	23	ABP44712	Human BLyS binding
20	617	96.3	249	23	ABP44732	Human BLyS binding
21	616	96.1	249	23	ABP44364	Human BLyS binding
22	616	96.1	249	23	ABP44388	Human BLyS binding
23	616	96.1	249	23	ABP44685	Human BLyS binding
24	616	96.1	249	23	ABP44687	Human BLyS binding
25	616	96.1	249	23	ABP44698	Human BLyS binding
26	616	96.1	249	23	ABP44702	Human BLyS binding
27	616	96.1	249	23	ABP44718	Human BLyS binding
28	615	95.9	249	23	ABP44404	Human BLyS binding
29	615	95.9	249	23	ABP44417	Human BLyS binding
30	615	95.9	249	23	ABP44633	Human BLyS binding
31	615	95.9	249	23	ABP44644	Human BLyS binding
32	615	95.9	249	23	ABP44711	Human BLyS binding
33	615	95.9	249	23	ABP44737	Human BLyS binding
34	615	95.9	249	23	ABP44754	Human BLyS binding
35	615	95.9	249	23	ABP44775	Human BLyS binding
36	615	95.9	249	23	ABP44778	Human BLyS binding
37	615	95.9	249	23	ABP44783	Human BLyS binding
38	614	95.8	249	23	ABP44311	Human BLyS binding
39	614	95.8	249	23	ABP44318	Human BLyS binding
40	614	95.8	249	23	ABP44422	Human BLyS binding
41	614	95.8	249	23	ABP44450	Human BLyS binding
42	614	95.8	249	23	ABP44563	Human BLyS binding
43	614	95.8	249	23	ABP44706	Human BLyS binding
44	614	95.8	249	23	ABP44733	Human BLyS binding
45	614	95.8	249	23	ABP44741	Human BLyS binding

ALIGNMENTS

RESULT 1
ABP44316
ID ABP44316 standard; Protein; 249 AA.
XX
AC ABP44316;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 327.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110..
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.

PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 794-795; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 100.0%; Score 641; DB 23; Length 249;
Best Local Similarity 100.0%; Pred. No. 1.9e-52;
Matches 123; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 2
ABP44774
ID ABP44774 standard; Protein; 249 AA.
XX
AC ABP44774;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 785.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1338-1339; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 97.7%; Score 626; DB 23; Length 249;
Best Local Similarity 97.6%; Pred. No. 5e-51;
Matches 120; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLEPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 3
ABP44516
ID ABP44516 standard; Protein; 249 AA.
XX
AC ABP44516;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 527.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.

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XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1031-1032; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             97.0%;  Score 622;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.2e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

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Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||| | ||||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPQHPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 4
ABP44673
ID   ABP44673 standard; Protein; 249 AA.
XX
AC   ABP44673;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 684.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1218-1219; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             97.0%;  Score 622;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.2e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
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Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||| | ||||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHEPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 5
ABP44793
ID   ABP44793 standard; Protein; 249 AA.
XX
```

```
AC   ABP44793;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 804.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1360-1361; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             97.0%;  Score 622;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.2e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHALDVWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 6
ABP44649
ID   ABP44649 standard; Protein; 249 AA.
XX
AC   ABP44649;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 660.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1189-1190; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.9%;  Score 621;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.5e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
```

```
Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 7
ABP44333
ID ABP44333 standard; Protein; 249 AA.
XX
AC ABP44333;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 344.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 814-815; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

```
  Query Match           96.7%;  Score 620;  DB 23;  Length 249;
  Best Local Similarity  97.6%;  Pred. No. 1.8e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 8
ABP44352
ID ABP44352 standard; Protein; 249 AA.
XX
AC ABP44352;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 363.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 837-838; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,

```
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.7%;  Score 620;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.8e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSYLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 9
ABP44653
ID   ABP44653 standard; Protein; 249 AA.
XX
AC   ABP44653;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 664.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1194-1195; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.7%;  Score 620;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 1.8e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||  ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 10
ABP44579
ID   ABP44579 standard; Protein; 249 AA.
XX
AC   ABP44579;
XX
DT   19-AUG-2002. (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 590.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1106-1107; 3148pp; English.
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XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.6%;  Score 619;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.3e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||| || ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLSFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 11
ABP44810
ID   ABP44810 standard; Protein; 249 AA.
XX
AC   ABP44810;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 821.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1380-1381; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.6%;  Score 619;  DB 23;  Length 249;
  Best Local Similarity   97.6%;  Pred. No. 2.3e-50;
  Matches  120;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||| || ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHANLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 12
ABP44313
ID   ABP44313 standard; Protein; 249 AA.
XX
AC   ABP44313;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 324.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
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```
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Rüben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 790-791; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.4%;  Score 618;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 2.8e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||| |  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGLDVWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 13
ABP44314
ID   ABP44314 standard; Protein; 249 AA.
XX
AC   ABP44314;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 325.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 792-793; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.4%;  Score 618;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 2.8e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 14
ABP44585
ID   ABP44585 standard; Protein; 249 AA.
XX
AC   ABP44585;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 596.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
```

```
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1113-1114; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.4%;  Score 618;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 2.8e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||  |:||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 15
ABP44690
ID   ABP44690 standard; Protein; 249 AA.
XX
AC   ABP44690;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 701.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1238-1239; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.4%;  Score 618;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 2.8e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||| |   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLDSWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

```
RESULT 16
ABP44355
ID   ABP44355 standard; Protein; 249 AA.
XX
AC   ABP44355;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 366.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 840-841; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match           96.3%;  Score 617;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 3.5e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  |:|||||||||

Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 17
ABP44393
ID   ABP44393 standard; Protein; 249 AA.
XX
AC   ABP44393;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 404.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 885-886; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match           96.3%;  Score 617;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 3.5e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;
```

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||| |||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLTPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 18
ABP44475
ID   ABP44475 standard; Protein; 249 AA.
XX
AC   ABP44475;
XX
[redacted]  19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 486.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
[redacted]  Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 983-984; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.3%;  Score 617;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 3.5e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||| |||||||||||||||||||||||||||||:| | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPNHPLYPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 19
ABP44712
ID   ABP44712 standard; Protein; 249 AA.
XX
AC   ABP44712;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 723.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1264-1265; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
```

```
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match            96.3%;  Score 617;  DB 23;  Length 249;
  Best Local Similarity  96.7%;  Pred. No. 3.5e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 20
ABP44732
ID   ABP44732 standard; Protein; 249 AA.
XX
AC   ABP44732;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 743.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1288-1289; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match            96.3%;  Score 617;  DB 23;  Length 249;
  Best Local Similarity  96.7%;  Pred. No. 3.5e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLAPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 21
ABP44364
ID   ABP44364 standard; Protein; 249 AA.
XX
AC   ABP44364;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 375.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
```

PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 851-852; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 96.1%; Score 616; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 4.4e-50;
Matches 119; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  |:|||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHLPLTPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 22
ABP44388
ID ABP44388 standard; Protein; 249 AA.
XX
AC ABP44388;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 399.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 879-880; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 96.1%; Score 616; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 4.4e-50;
Matches 119; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSILHPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 23
ABP44685
ID ABP44685 standard; Protein; 249 AA.
XX
AC ABP44685;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 696.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.

XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1232-1233; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 96.1%; Score 616; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 4.4e-50;
Matches 119; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHEPLFPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 24
ABP44687
ID ABP44687 standard; Protein; 249 AA.
XX
AC ABP44687;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 698.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1234-1235; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 96.1%; Score 616; DB 23; Length 249;
Best Local Similarity 95.9%; Pred. No. 4.4e-50;
Matches 118; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDSWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 25
ABP44698
ID ABP44698 standard; Protein; 249 AA.
XX
AC ABP44698;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 709.
XX

```
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders.-
XX
PS   Claim 1; Page 1247-1248; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.1%;  Score 616;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 4.4e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 26
ABP44702
ID   ABP44702 standard; Protein; 249 AA.
XX
AC   ABP44702;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 713.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1252-1253; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.1%;  Score 616;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 4.4e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLDPWGRGTMVT 120

Qy        121 VSS 123
```

```
                ||||
Db        121 VSS 123


RESULT 27
ABP44718
ID   ABP44718 standard; Protein; 249 AA.
XX
AC   ABP44718;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 729.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1271-1272; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             96.1%;  Score 616;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 4.4e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| ||||||||||||||||||||||||||||:   |||||||

Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDTWGRGTMVT 120

Qy        121 VSS 123
              |||

Db        121 VSS 123


RESULT 28
ABP44404
ID   ABP44404 standard; Protein; 249 AA.
XX
AC   ABP44404;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 415.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 898-899; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;
```

```
  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5.4e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLFFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 29
ABP44417
ID  ABP44417 standard; Protein; 249 AA.
XX
AC  ABP44417;
XX
DT  19-AUG-2002  (first entry)
XX
DE  Human BLyS binding scFv SEQ ID 428.
XX
KW  BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW  tumour necrosis factor; B cell proliferation; B cell differentiation;
KW  immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW  antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW  systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW  common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS  Homo sapiens.
XX
PN  WO200202641-A1.
XX
PD  10-JAN-2002.
XX
PF  15-JUN-2001; 2001WO-US19110.
XX
PR  16-JUN-2000; 2000US-212210P.
PR  17-OCT-2000; 2000US-240816P.
PR  16-MAR-2001; 2001US-276248P.
PR  21-MAR-2001; 2001US-277379P.
PR  25-MAY-2001; 2001US-293499P.
XX
PA  (HUMA-) HUMAN GENOME SCI INC.
PA  (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI  Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR  WPI; 2002-114799/15.
XX
PT  Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT  the diagnosis and treatment of cancers and immune disorders -
XX
PS  Claim 1; Page 914-915; 3148pp; English.
XX
CC  This invention describes novel antibodies that immunospecifically bind to
CC  B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC  tumour necrosis factor (TNF) super family and induces B cell
CC  proliferation and differentiation. The antibodies of the invention have
CC  cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC  antirheumatic and antiAIDS activity and can be used in vaccines to
CC  inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC  and so may be used to detect and quantitate the presence of BLyS in
CC  biological samples and may be used in this way to diagnose disease
CC  associated with aberrant expression of BLyS. They may also be
CC  administered to treat diseases associated with aberrant BLyS expression
CC  and activity such as cancer, immune, and autoimmune disorders and
CC  diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC  immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC  acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC  the antibodies and fragments of the antibodies described in the method
CC  of the invention.
XX
SQ  Sequence   249 AA;

  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 5.4e-50;
  Matches  118;  Conservative    2;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:| : |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPNHPMFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 30
ABP44633
ID  ABP44633 standard; Protein; 249 AA.
XX
AC  ABP44633;
XX
DT  19-AUG-2002  (first entry)
XX
DE  Human BLyS binding scFv SEQ ID 644.
XX
KW  BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW  tumour necrosis factor; B cell proliferation; B cell differentiation;
KW  immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW  antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW  systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW  common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS  Homo sapiens.
XX
PN  WO200202641-A1.
XX
PD  10-JAN-2002.
XX
PF  15-JUN-2001; 2001WO-US19110.
XX
PR  16-JUN-2000; 2000US-212210P.
PR  17-OCT-2000; 2000US-240816P.
PR  16-MAR-2001; 2001US-276248P.
PR  21-MAR-2001; 2001US-277379P.
PR  25-MAY-2001; 2001US-293499P.
XX
PA  (HUMA-) HUMAN GENOME SCI INC.
PA  (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI  Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR  WPI; 2002-114799/15.
XX
PT  Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT  the diagnosis and treatment of cancers and immune disorders -
XX
PS  Claim 1; Page 1170-1171; 3148pp; English.
XX
CC  This invention describes novel antibodies that immunospecifically bind to
CC  B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC  tumour necrosis factor (TNF) super family and induces B cell
CC  proliferation and differentiation. The antibodies of the invention have
CC  cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
```

CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 95.9%; Score 615; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 5.4e-50;
Matches 119; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLHPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 31
ABP44644
ID ABP44644 standard; Protein; 249 AA.
XX
AC ABP44644;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 655.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1183-1184; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 95.9%; Score 615; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 5.4e-50;
Matches 119; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHSPLFPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 32
ABP44711
ID ABP44711 standard; Protein; 249 AA.
XX
AC ABP44711;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 722.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX

PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1263-1264; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 95.9%; Score 615; DB 23; Length 249;
Best Local Similarity 95.9%; Pred. No. 5.4e-50;
Matches 118; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQRSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHYPLHPWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 33
A[redacted]4737
[redacted] ABP44737 standard; Protein; 249 AA.
XX
AC ABP44737;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 748.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1294-1295; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 95.9%; Score 615; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 5.4e-50;
Matches 119; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
Db 1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy 61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
Db 61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLLFWGRGTMVT 120

Qy 121 VSS 123
Db 121 VSS 123

RESULT 34
ABP44754
ID ABP44754 standard; Protein; 249 AA.
XX
AC ABP44754;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 765.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.

```
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1314-1315; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5.4e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:|  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSLLFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 35
ABP44775
ID   ABP44775 standard; Protein; 249 AA.
XX
AC   ABP44775;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 786.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1339-1340; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 5.4e-50;
  Matches  118;  Conservative    0;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||||    ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 36
ABP44778
ID   ABP44778 standard; Protein; 249 AA.
XX
AC   ABP44778;
XX
```

```
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 789.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1342-1343; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 5.4e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||| | ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLQFWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

```
RESULT 37
ABP44783
ID   ABP44783 standard; Protein; 249 AA.
XX
AC   ABP44783;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 794.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1348-1349; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.9%;  Score 615;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 5.4e-50;
  Matches  118;  Conservative    0;  Mismatches    5;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
```

```
                ||||||||||||||||| |||||||||||||||||||||||||||||||    ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHGFDAWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 38
ABP44311
ID ABP44311 standard; Protein; 249 AA.
XX
AC ABP44311;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 322.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 788-789; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

```
  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:   |||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

RESULT 39
ABP44318
ID ABP44318 standard; Protein; 249 AA.
XX
AC ABP44318;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 329.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 796-797; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent

```
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 40
ABP44422
ID   ABP44422 standard; Protein; 249 AA.
XX
AC   ABP44422;
XX
DT   19-AUG-2002 (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 433.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 920-921; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.7e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||| ||  ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHDALQSWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 41
ABP44450
ID   ABP44450 standard; Protein; 249 AA.
XX
AC   ABP44450;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 461.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 953-954; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
```

```
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 42
ABP44563
ID   ABP44563 standard; Protein; 249 AA.
XX
AC   ABP44563;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 574.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1087-1088; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.7e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLYPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 43
ABP44706
ID   ABP44706 standard; Protein; 249 AA.
XX
AC   ABP44706;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 717.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
```

```
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1257-1258; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.7e-50;
  Matches  119;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||  | |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHAPLFPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 44
ABP44733
ID   ABP44733 standard; Protein; 249 AA.
XX
AC   ABP44733;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 744.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1289-1290; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||||:  |||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 45
ABP44741
ID   ABP44741 standard; Protein; 249 AA.
XX
AC   ABP44741;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 752.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
```

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XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1298-1299; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| ||||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 46
ABP44755
ID   ABP44755 standard; Protein; 249 AA.
XX
AC   ABP44755;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 766.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1315-1316; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.7e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||||||||||||||||||||||||||||||||| |: || |||||
Db         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLTFWGWGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 47
ABP44756
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```
ID   ABP44756 standard; Protein; 249 AA.
XX
AC   ABP44756;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 767.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1316-1317; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   96.7%;  Pred. No. 6.7e-50;
  Matches  119;  Conservative    1;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||||||||||||||||||||||||||||||||||| |: || |||||
Db         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHPLTFWGWGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123


RESULT 48
ABP44781
ID   ABP44781 standard; Protein; 249 AA.
XX
AC   ABP44781;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 792.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1346-1347; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
```

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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
                ||||||||||||||| |||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
                |||
Db        121 VSS 123


RESULT 49
ABP44786
ID   ABP44786 standard; Protein; 249 AA.
XX
AC   ABP44786;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 797.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1352-1353; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             95.8%;  Score 614;  DB 23;  Length 249;
  Best Local Similarity   95.9%;  Pred. No. 6.7e-50;
  Matches  118;  Conservative    1;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              ||||||||||||||| |||||||||||||||||||||||||||:   ||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPHHSFDLWGRGTMVT 120

Qy        121 VSS 123
                |||
Db        121 VSS 123


RESULT 50
ABP44788
ID   ABP44788 standard; Protein; 249 AA.
XX
AC   ABP44788;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 799.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 1354-1355; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
```

CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 95.8%; Score 614; DB 23; Length 249;
Best Local Similarity 96.7%; Pred. No. 6.7e-50;
Matches 119; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

```
Qy          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 QVQLQQSGAEVKKPGSSVRVSCKASGGTFNNNAINWVRQAPGQGLEWMGGIIPMFGTAKY 60

Qy         61 SQNFQGRVAITADESTGTASMELSSLRSEDTAVYYCARSRDLLLFPHHALSPWGRGTMVT 120
              |||||||||||||||| |||||||||||||||||||||||||||   ||||||||||
Db         61 SQNFQGRVAITADESTSTASMELSSLRSEDTAVYYCARSRDLLLFPQEPLSPWGRGTMVT 120

Qy        121 VSS 123
              |||
Db        121 VSS 123
```

Search completed: November 26, 2003, 13:39:14
Job time : 40.4231 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:36:04 ; Search time 28.9359 Seconds
(without alignments)
989.907 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 830525 seqs, 258052604 residues

Total number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SPTREMBL_23:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	539	92.5	107	4	Q9NSD6	Q9nsd6 homo sapien
2	438	75.1	233	4	Q8TBC9	Q8tbc9 homo sapien
3	427	73.2	233	4	Q8N5F4	Q8n5f4 homo sapien
4	367.5	63.0	107	4	Q9UL82	Q9ul82 homo sapien
5	367.5	63.0	234	4	Q8N355	Q8n355 homo sapien
6	346	59.3	237	4	Q8WUK4	Q8wuk4 homo sapien
7	340	58.3	237	4	Q8WTU6	Q8wtu6 homo sapien
8	335.5	57.5	236	4	Q96E61	Q96e61 homo sapien
9	323	55.4	116	4	Q96JD0	Q96jd0 homo sapien
10	322.5	55.3	112	4	Q96JD1	Q96jd1 homo sapien
11	319	54.7	110	4	Q8TE63	Q8te63 homo sapien
12	316	54.2	112	4	Q96JD2	Q96jd2 homo sapien
13	311.5	53.4	236	4	Q8NEJ1	Q8nej1 homo sapien
14	301	51.6	233	4	Q96I69	Q96i69 homo sapien
15	297	50.9	101	4	Q8IZD8	Q8izd8 homo sapien
16	278	47.7	108	4	Q96SB0	Q96sb0 homo sapien
17	270	46.3	113	11	Q8CGS1	Q8cgs1 mus musculu
18	270	46.3	235	11	Q99M11	Q99m11 mus musculu
19	268.5	46.1	129	11	Q8VDE2	Q8vde2 mus musculu
20	248.5	42.6	108	4	Q9UL77	Q9ul77 homo sapien
21	248	42.5	109	11	Q9ET13	Q9et13 mus musculu
22	247.5	42.5	240	4	Q8WUK3	Q8wuk3 homo sapien
23	246	42.2	134	11	Q8VDD0	Q8vdd0 mus musculu
24	245	42.0	107	4	Q9UL81	Q9ul81 homo sapien
25	244	41.9	109	4	Q9UL78	Q9ul78 homo sapien
26	243	41.7	107	4	Q96SA9	Q96sa9 homo sapien
27	237	40.7	114	11	Q8K1F1	Q8k1f1 mus musculu
28	235	40.3	112	11	Q8K1F2	Q8k1f2 mus musculu
29	233.5	40.1	109	11	Q920E6	Q920e6 mus musculu
30	233	40.0	109	4	Q9UL85	Q9ul85 homo sapien
31	232	39.8	112	11	Q8K1F3	Q8k1f3 mus musculu
32	230.5	39.5	234	4	Q8NEK1	Q8nek1 homo sapien
33	230	39.5	239	4	Q8TCD0	Q8tcd0 homo sapien
34	229.5	39.4	108	4	Q9UL70	Q9ul70 homo sapien
35	229.5	39.4	298	11	Q9QYF0	Q9qyf0 mus musculu
36	229	39.3	101	11	Q9JL78	Q9jl78 mus musculu
37	228	39.1	109	4	Q9UL86	Q9ul86 homo sapien
38	228	39.1	112	11	Q8K1F0	Q8k1f0 mus musculu
39	226.5	38.9	111	11	Q920E9	Q920e9 mus musculu
40	226.5	38.9	234	11	Q8VCP0	Q8vcp0 mus musculu
41	226	38.8	106	5	Q9U410	Q9u410 schistosoma
42	225.5	38.7	109	6	Q9N0W5	Q9n0w5 oryctolagus
43	224.5	38.5	107	11	Q9ERZ9	Q9erz9 mus musculu
44	223	38.3	97	11	Q9JL76	Q9jl76 mus musculu
45	223	38.3	103	11	Q9JL80	Q9jl80 mus musculu

ALIGNMENTS

RESULT 1
Q9NSD6
ID Q9NSD6 PRELIMINARY; PRT; 107 AA.
AC Q9NSD6;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Hypothetical protein (Fragment).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Lymphocytes;
RA Hohmann A.;
RT "Autoimmunity.";
RL Submitted (JUL-1995) to the EMBL/GenBank/DDBJ databases.
DR EMBL; L43092; AAA69746.2; -.
DR HSSP; P01709; 2MCG.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
FT NON_TER 1 1
FT NON_TER 107 107
SQ SEQUENCE 107 AA; 11306 MW; A2B04B37187A5F00 CRC64;

Query Match 92.5%; Score 539; DB 4; Length 107;
Best Local Similarity 95.3%; Pred. No. 5e-47;
Matches 102; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

```
Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||||| ||||||||||:||||||||||||||||||||||||||||||||||||||||||
Db          1 ELTQDPVVSVALGQTVRITCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 60

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
```

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                     |||||||||||||||||||||||||:||||||| ||||||:|||||
Db         61 GSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHAVFGGGTKLTVLG 107


RESULT 2
Q8TBC9
ID   Q8TBC9      PRELIMINARY;      PRT;   233 AA.
AC   Q8TBC9;
DT   01-JUN-2002 (TrEMBLrel. 21, Created)
DT   01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=B-cell;
RA   Strausberg R.;
RL   Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC022823; AAH22823.1; -.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   233 AA;  24867 MW;  367411BFD6F4DF92 CRC64;

  Query Match             75.1%;  Score 438;  DB 4;  Length 233;
  Best Local Similarity   75.2%;  Pred. No. 2.1e-36;
  Matches   82;  Conservative    9;  Mismatches   18;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:|   || ||||||||||||||  | ||||||:|
Db         20 SYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVLVIYKDNERPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||| | :|||:| |||||||||| | |||| :|||||||:|||||
Db         80 FSGSSSGTTVTLTISGVQAEDEADYYCQSADSSGTYWVFGGGTKLTVLG 128


RESULT 3
Q8N5F4
ID   Q8N5F4      PRELIMINARY;      PRT;   233 AA.
AC   Q8N5F4;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain, and Lung;
RA   Strausberg R.;
RL   Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC032452; AAH32452.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00409; IG; 2.
DR   SMART; SM00407; IGc1; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   233 AA;  24961 MW;  F092CFB6AA6E3A9A CRC64;

  Query Match             73.2%;  Score 427;  DB 4;  Length 233;
  Best Local Similarity   73.4%;  Pred. No. 2.8e-35;
  Matches   80;  Conservative    9;  Mismatches   20;  Indels    0;  Gaps    0;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:|| ||:|   || ||||| || ||||||    ||||||:|
Db         20 SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQTPVLVIYDDTERPSGIPER 79

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||  |:||::||| |||||||| | |||||||||||||:|||||
Db         80 FSGSSSGTVATLTLSGAQVEDEADYYCYSSDSSGNHWVFGGGTKLTVLG 128


RESULT 4
Q9UL82
ID   Q9UL82      PRELIMINARY;      PRT;   107 AA.
AC   Q9UL82;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035032; AAD56268.1; -.
DR   HSSP; P01703; 7FAB.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     107    107
SQ   SEQUENCE   107 AA;  11445 MW;  52F0CC1AB26821DC CRC64;

  Query Match             63.0%;  Score 367.5;  DB 4;  Length 107;
  Best Local Similarity   67.0%;  Pred. No. 1.1e-29;
  Matches   73;  Conservative   13;  Mismatches   20;  Indels    3;  Gaps    2;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | ||||  :|||: ||| |:|| || |   || |:||||||||:|||:    ||||||:|
Db          1 SYELTQPSSVSVSPGQTARITCSGDLLAKKYARWFQQKPGQAPILVIFKDTERPSGIPER 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYC-SSRDSSGNHWVFGGGTELTVL 110
              ||||||| | :|||:||| |||||||| |: |::|   ||||||:||||
Db         61 FSGSSSGTTVTLTISGAQVEDEADYYCYSASDNNGR--VFGGGTKLTVL 107


RESULT 5
Q8N355
ID   Q8N355      PRELIMINARY;      PRT;   234 AA.
AC   Q8N355;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
```

```
RC   TISSUE=Brain;
RA   Strausberg R.;
RL   Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC028090; AAH28090.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00409; IG; 2.
DR   SMART; SM00407; IGc1; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   234 AA;  24792 MW;  CC848CAEBA4A9D63 CRC64;

  Query Match          63.0%;  Score 367.5;  DB 4;  Length 234;
  Best Local Similarity   67.3%;  Pred. No. 2.9e-29;
  Matches   72;  Conservative   14;  Mismatches   20;  Indels    1;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||| ||| |:|| |::: |    |||||||||||||:|  ::||||||:||||
Db         23 LTQPPSVSVAPGQTARITCGGNNIGSKSVHWYQQKPGQAPVLVVYDDSDRPSGIPERFSG 82

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNH-WVFGGGTELTVLG 111
              |:|||||:|||:   | |||||||   ||| :|  ||||||:|||||
Db         83 SNSGNTATLTISRVDAGDEADYYCQLWDSSSDHPVVFGGGTKLTVLG 129


RESULT 6
Q8WUK4
ID   Q8WUK4      PRELIMINARY;      PRT;   237 AA.
AC   Q8WUK4;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Tonsil;
RA   Strausberg R.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC020233; AAH20233.1; -.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   237 AA;  24897 MW;  73C7D70B8039D186 CRC64;

  Query Match          59.3%;  Score 346;  DB 4;  Length 237;
  Best Local Similarity   64.3%;  Pred. No. 4.4e-27;
  Matches   72;  Conservative    8;  Mismatches   28;  Indels    4;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |:|| | || | ::| | |       |   |||| || || |:||| :|||||:|
Db         21 SVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPGTAPKLLIYGNSNRPSGVP 80

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSS-GNHWVFGGGTELTVLG 111
              |||||| || :||| ||| |||||||||| | |||     ||||||:|||||
Db         81 DRFSGSKSGTSASLAITGLQAEDEADYYCQSYDSSLSGFVVFGGGTKLTVLG 132


RESULT 7
Q8WTU6
ID   Q8WTU6      PRELIMINARY;      PRT;   237 AA.
AC   Q8WTU6;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Tonsil;
RA   Strausberg R.;
RL   Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC022098; AAH22098.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   237 AA;  24884 MW;  E6CF371E753968E8 CRC64;

  Query Match          58.3%;  Score 340;  DB 4;  Length 237;
  Best Local Similarity   62.6%;  Pred. No. 1.8e-26;
  Matches   72;  Conservative    9;  Mismatches   24;  Indels   10;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |:|| | || | ::| | |       |   |||| || || |:||| :|||||:|
Db         21 SVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPGTAPKLLIYGNSNRPSGVP 80

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRD----SSGNHWVFGGGTELTVLG 111
              |||||| || :||| ||| |||||||||| | |     :||   ||||||:|||||
Db         81 DRFSGSKSGTSASLAITGLQAEDEADYYCQSYDYSLSASG---VFGGGTKLTVLG 132


RESULT 8
Q96E61
ID   Q96E61      PRELIMINARY;      PRT;   236 AA.
AC   Q96E61;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Strausberg R.;
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC012876; AAH12876.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   236 AA;  24712 MW;  7EC9FB3622FED957 CRC64;

  Query Match          57.5%;  Score 335.5;  DB 4;  Length 236;
  Best Local Similarity   61.3%;  Pred. No. 5.1e-26;
  Matches   68;  Conservative   10;  Mismatches   30;  Indels    3;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | | | |:|| | |||| ::| | |       |   |||| || || ::||| |||||:|
Db         21 SVLAQPPSVSGAPGQTVTISCTGSSTNIGAGYAVHWYQQFPGAAPKVLIYGNYNRPSGVP 80
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Qy          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               |||||| || :||| ||| |||||||||| | | | :  ||| ||::||||
Db          81 DRFSGSKSGTSASLAITGLQAEDEADYYCQSYDGSLSGSVFGAGTKVTVLG 131


RESULT 9
Q96JD0
ID   Q96JD0      PRELIMINARY;      PRT;   116 AA.
AC   Q96JD0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Amyloid lambda 6 light chain variable region SAR (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Bone marrow;
RA   Perfetti V., Casarini S., Colli Vignarelli M., Merlini G.;
RT   "Amyloid lambda 6 light chain variable region SAR.";
RL   Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF267875; AAK58587.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     116    116
SQ   SEQUENCE   116 AA;  12294 MW;  F7B0E9F49FAE369E CRC64;

  Query Match             55.4%;  Score 323;  DB 4;  Length 116;
  Best Local Similarity   59.1%;  Pred. No. 3.9e-25;
  Matches   65;  Conservative   15;  Mismatches   26;  Indels    4;  Gaps    2;

Qy           6 LTQDPAVSVALGQTVRVTCQGD--SLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
               |||  :|| : |:|| ::| |   |: : |  ||| :|| ||  |||  | ||||:||||
Db           4 LTQPHSVSESPGKTVTISCTGSSGSIATNYVQWYQLRPGSAPTTVIYEDNQRPSGVPDRF 63

Qy          64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               |||  || |:|||||:| : |||||||| | |||  : :|||||:|||||
Db          64 SGSIDSSSNSASLTISGLKTEDEADYYCQSYDSSIGNVIFGGGTKLTVLG 113


RESULT 10
Q96JD1
ID   Q96JD1      PRELIMINARY;      PRT;   112 AA.
AC   Q96JD1;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Amyloid lambda 6 light chain variable region PIP (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Bone marrow;
RA   Perfetti V., Casarini S., Colli Vignarelli M., Merlini G.;
RT   "Amyloid lambda 6 light chain variable region PIP.";
RL   Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF267874; AAK58586.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  12047 MW;  0D3885AC23567B9F CRC64;

  Query Match             55.3%;  Score 322.5;  DB 4;  Length 112;
  Best Local Similarity   59.1%;  Pred. No. 4.2e-25;
  Matches   65;  Conservative   16;  Mismatches   24;  Indels    5;  Gaps    3;

Qy           6 LTQDPAVSVALGQTVRVTC--QGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
               |||  :|| : |:|: ::|     |: | |  ||||:|| ||  |||  | ||||:||||
Db           4 LTQPHSVSESPGKTITISCTRSSGSIASNYVQWYQQRPGSAPTTVIYEDNQRPSGVPDRF 63

Qy          64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               |||  || |:|||||:| : |||||||| | ||: |: :|||||:|||||
Db          64 SGSIDSSSNSASLTISGLKTEDEADYYCQSYDSN-NYALFGGGTQLTVLG 112


RESULT 11
Q8TE63
ID   Q8TE63      PRELIMINARY;      PRT;   110 AA.
AC   Q8TE63;
DT   01-JUN-2002 (TrEMBLrel. 21, Created)
DT   01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Immunglobulin light chain variable region (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=95007525; PubMed=7923137;
RA   Hall B.L., Murray J.H., Haspel M.V., Kobrin B.J.;
RT   "Establishment, molecular rescue, and expression of 123AV16-1, a
RT   tumor-reactive human monoclonal antibody.";
RL   Cancer Res. 54:5178-5185(1994).
DR   EMBL; L33985; AAL68704.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11479 MW;  599D1628F8F5437C CRC64;

  Query Match             54.7%;  Score 319;  DB 4;  Length 110;
  Best Local Similarity   58.7%;  Pred. No. 9.2e-25;
  Matches   64;  Conservative   13;  Mismatches   30;  Indels    2;  Gaps    1;

Qy           4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
               | ||| |:|| | || | ::| | |  : : : ||||| || || |:||  | ||||:||
Db           2 SALTQPPSVSAAPGQKVTISCSGTSSNIGNNFVSWYQQFPGTAPKLLIYDNNKRPSGVPD 61

Qy          62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
               ||||| || :|:| ||| |  |||||||  : |:     ||||||:||||
Db          62 RFSGSKSGTSATLGITGLQTGDEADYYCGTWDTRLRAGVFGGGTKLTVL 110


RESULT 12
Q96JD2
ID   Q96JD2      PRELIMINARY;      PRT;   112 AA.
AC   Q96JD2;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Amyloid lambda 6 light chain variable region NEG (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
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RP   SEQUENCE FROM N.A.
RC   TISSUE=Bone marrow;
RA   Perfetti V., Casarini S., Colli Vignarelli M., Merlini G.;
RT   "Amyloid lambda 6 light chain variable region NEG.";
RL   Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF267873; AAK58585.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11908 MW;  080B4B37E2360B06 CRC64;

  Query Match             54.2%;  Score 316;  DB 4;  Length 112;
  Best Local Similarity   58.7%;  Pred. No. 1.9e-24;
  Matches   64;  Conservative   13;  Mismatches   28;  Indels    4;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||  :|| : |:|: ::| | |  : |    ||||:|| || :|:|  | ||||:||||
Db          4 LTQPHSVSGSPGKTITISCTGSSGRIASNSVQWYQQRPGSAPNIVMYENNQRPSGVPDRF 63

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||  || |:|||||:|   |||||||| | | | |  |||||| ||||
Db         64 SGSIDSSSNSASLTISGLMTEDEADYYCQSFDDSTNQGVFGGGTRLTVL 112


RESULT 13
Q8NEJ1
ID   Q8NEJ1      PRELIMINARY;      PRT;   236 AA.
AC   Q8NEJ1;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Strausberg R.;
RL   Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC030984; AAH30984.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00409; IG; 2.
DR   SMART; SM00407; IGc1; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   236 AA;  25024 MW;  1703B77942630E08 CRC64;

  Query Match             53.4%;  Score 311.5;  DB 4;  Length 236;
  Best Local Similarity   57.3%;  Pred. No. 1.4e-23;
  Matches   63;  Conservative   16;  Mismatches   28;  Indels    3;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |: | : || | ::| |   :: | |  |||| || || |:||  : ||||:||
Db         21 SVLTQPPSASGSPGQRVTISCSGSRSNIGSNYVYWYQQVPGTAPKLLIYRNDQRPSGVPD 80

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSS-GNHWVFGGGTELTVL 110
              ||||| || :||| |:| ::|||||||:: | |   | ||||||:||||
Db         81 RFSGSKSGTSASLAISGLRSEDEADYYCAAWDDSLSVHVVFGGGTKLTVL 130


RESULT 14
Q96I69
ID   Q96I69      PRELIMINARY;      PRT;   233 AA.
AC   Q96I69;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=B-cell;
RA   Strausberg R.;
RL   Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC007782; AAH07782.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   InterPro; IPR001412; tRNA-synt_I.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00178; AA_TRNA_LIGASE_I; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   233 AA;  24802 MW;  C694F8397B27650B CRC64;

  Query Match             51.6%;  Score 301;  DB 4;  Length 233;
  Best Local Similarity   53.8%;  Pred. No. 1.5e-22;
  Matches   57;  Conservative   18;  Mismatches   31;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              |||  :|||| ||| |:|| | :| |   :||| :|||||:||:|    ||:|||:| |
Db         23 LTQPASVSVAPGQTARITCGGSNLGSKSVNWYQLRPGQAPILVVYENKERPAGIPERLSA 82

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              :|  ||:|||:   | |||||:|   |::   :||| ||::||||
Db         83 LTSEETATLTISSVVAGDEADYFCQVWDTTSQQYVFGTGTQVTVLG 128


RESULT 15
Q8IZD8
ID   Q8IZD8      PRELIMINARY;      PRT;   101 AA.
AC   Q8IZD8;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-thyroglobulin light chain variable region (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Jang Y.-J., Chung J., Park J.-Y.;
RT   "Isolation and Sequence Analysis of Monoclonal Anti-Histone and Anti-
RT   Thyroglobulin Single Chain Fv from SLE Patient by Phage Display.";
RL   Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY145444; AAN64328.1; -.
FT   NON_TER       1      1
FT   NON_TER     101    101
SQ   SEQUENCE   101 AA;  10374 MW;  1506C2D9AACBA793 CRC64;

  Query Match             50.9%;  Score 297;  DB 4;  Length 101;
  Best Local Similarity   59.4%;  Pred. No. 1.4e-22;
  Matches   60;  Conservative   12;  Mismatches   27;  Indels    2;  Gaps    1;

Qy         13 SVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGN 70
              | | || | ::| | |  :   | ||||| || || |:|:  : ||||||||||| ||
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Db          1 SAAPGQKVTISCSGSSSNIGKNYVSWYQQVPGTAPQLLIHDTDKRPSGIPDRFSGSQSGT 60

Qy         71 TASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              :|:| ||| |  ||||||| : |:| :  ||||||:|||||
Db         61 SATLGITGLQTGDEADYYCGTWDTSLSAVVFGGGTKLTVLG 101


RESULT 16
Q96SB0
ID   Q96SB0      PRELIMINARY;      PRT;   108 AA.
AC   Q96SB0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-streptococcal/anti-myosin immunoglobulin lambda light chain
DE   variable region (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98375893; PubMed=9712075;
RA   Adderson E.E., Shikhman A.R., Ward K.E., Cunningham M.W.;
RT   "Molecular analysis of polyreactive monoclonal antibodies from
RT   rheumatic carditis: human anti-N-acetylglucosamine/anti-myosin
RT   antibody V region genes.";
RL   J. Immunol. 161:2020-2031(1998).
DR   EMBL; U96394; AAB68783.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
SQ   SEQUENCE   108 AA;  11594 MW;  F4B5DC478A043F48 CRC64;

  Query Match             47.7%;  Score 278;  DB 4;  Length 108;
  Best Local Similarity   54.3%;  Pred. No. 1.3e-20;
  Matches   57;  Conservative   12;  Mismatches   32;  Indels    4;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |: |   || | ::| | |  : | |  |||| || || |:||  | ||||:||
Db          2 SVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTAPKLLIYRNNQRPSGVPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDS--SGNHWVFGGG 104
              ||||| || :||| |:| ::|||||||:: |   ||  |    |
Db         62 RFSGSKSGTSASLAISGLRSEDEADYYCAAWDDRLSGFMWYSAEG 106


RESULT 17
Q8CGS1
ID   Q8CGS1      PRELIMINARY;      PRT;   113 AA.
AC   Q8CGS1;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-deoxynivalenol scFv lambda light chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Wang Z., Munshi K., Osawa F., Pestka J.J., Hart L.P.;
RT   "Molecular Cloning of a Functional Single-Chain Fv Antibody with
RT   Lambda Light Chain and its Application in Detection of the Mycotoxin
RT   Deoxynivalenol.";
RL   Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AY151141; AAN75453.1; -.
FT   NON_TER       1      1
FT   NON_TER     113    113
SQ   SEQUENCE   113 AA;  12034 MW;  0C4E4C65597E22BE CRC64;

  Query Match             46.3%;  Score 270;  DB 11;  Length 113;
  Best Local Similarity   52.7%;  Pred. No. 8.6e-20;
  Matches   58;  Conservative   17;  Mismatches   29;  Indels    6;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |      ||:| |:||      :| | |||| |:| |
Db          4 VTQESALTTSPGETVTLTCRSSTGAVTTRNYANWVQEKPDHLFTALIGGTNNRPPGVPAR 63

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH-WVFGGGTELTVLG 111
              ||||  |: |:||||||| |||| |:|:   |  || |||||||:|||||
Db         64 FSGSLIGDKAALTITGAQTEDEAIYFCALWYS--NHFWVFGGGTKLTVLG 111


RESULT 18
Q99M11
ID   Q99M11      PRELIMINARY;      PRT;   235 AA.
AC   Q99M11;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical 25.4 kDa protein.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Strausberg R.;
RL   Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC002129; AAH02129.1; -.
DR   HSSP; P01703; 7FAB.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   235 AA;  25403 MW;  39807BFE6782A3FB CRC64;

  Query Match             46.3%;  Score 270;  DB 11;  Length 235;
  Best Local Similarity   54.9%;  Pred. No. 2.1e-19;
  Matches   62;  Conservative   14;  Mismatches   23;  Indels   14;  Gaps    5;

Qy          6 LTQDPAVSVALGQTVRVTCQ------GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGI 59
              |||  :|| :|| | :: |:       |||    | :|||  |::|  :||| : ||||:
Db         23 LTQPSSVSTSLGSTAKLPCKASTGNIGDS----YVNWYQQYMGRSPTNMIYGDDLRPSGV 78

Qy         60 PDRFSGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||||  || |:| |||    ||:||||||| |  |||   ||||||:||||
Db         79 SDRFSGSIDSSSNSAFLTIQNVQADDEADYYCQSY-SSGIR-VFGGGTKLTVL 129


RESULT 19
Q8VDE2
ID   Q8VDE2      PRELIMINARY;      PRT;   129 AA.
AC   Q8VDE2;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Immunoglobulin lambda chain variable region (Fragment).
GN   4G12-A-H10.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Spleen;
RA   Blachere T.;
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RL   Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Spleen;
RA   Melle G.;
RL   Thesis (1995),
RL   Department of Ecole Superieure de Technicien en Biologie Biochimie,
RL   Universite Catholique de Lyon, Lyon, France.
DR   EMBL; AJ291694; CAC82790.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  13565 MW;  C07F71003803ADBE CRC64;

  Query Match             46.1%;  Score 268.5;  DB 11;  Length 129;
  Best Local Similarity   53.2%;  Pred. No. 1.4e-19;
  Matches   58;  Conservative   16;  Mismatches   30;  Indels    5;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |    | ||:| |:||      :| | |||  |:| |
Db         23 VTQESALTTSPGETVTLTCRSSTGAVTISNYANWVQEKPDYLFTGLIGGTNNRAPGVPAR 82

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  |: |:||||||| |||| |:|    |  ||||||||:|||||
Db         83 FSGSLIGDKAALTITGAQTEDEAMYFCVLWYS--NHWVFGGGTKLTVLG 129


RESULT 20
Q9UL77
ID   Q9UL77      PRELIMINARY;      PRT;   108 AA.
AC   Q9UL77;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035037; AAD56273.1; -.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11738 MW;  C06681716C4D16F3 CRC64;

  Query Match             42.6%;  Score 248.5;  DB 4;  Length 108;
  Best Local Similarity   45.3%;  Pred. No. 1.2e-17;
  Matches   48;  Conservative   20;  Mismatches   35;  Indels    3;  Gaps    2;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | ::| ::|  | :||:     | | :||||||:|| |:||  ::  ||:| ||
Db          3 QMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPNLLIYAASSLQSGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   :|||:  | || | |||  : |    | || ||:: :
Db         63 SGSGSGTDFTLTISSLQPEDFATYYC--QQSYSTSWTFGEGTKVEI 106


RESULT 21
Q9ET13
ID   Q9ET13      PRELIMINARY;      PRT;   109 AA.
AC   Q9ET13;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Imunoglobulin light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Song M.-Y., Kang H.-K., Kwag W.-J., Moon H.-J., Song T.-H., Ko I.-Y.;
RT   "Nucleotide sequences encoding the variable regions of monoclonal Ab,
RT   A9-11-5, directed against S antigen of Hepatitis B virus.";
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF287275; AAG03053.1; -.
DR   HSSP; P01703; 7FAB.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11554 MW;  4F91E9D351B1E158 CRC64;

  Query Match             42.5%;  Score 248;  DB 11;  Length 109;
  Best Local Similarity   48.6%;  Pred. No. 1.4e-17;
  Matches   53;  Conservative   20;  Mismatches   30;  Indels    6;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |    : :|:| |:||      :|   |||  |:| |
Db          4 VTQESALTTSPGETVTLTCRSSTGAITTNNFANWVQEKPDHLFTGLIGDTNNRVPGVPAR 63

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  |: |:||||||| |||| |:|:      |:|||||||:|||||
Db         64 FSGSLIGDKAALTITGAQTEDEAIYFCA---LWYNNWVFGGGTKLTVLG 109


RESULT 22
Q8WUK3
ID   Q8WUK3      PRELIMINARY;      PRT;   240 AA.
AC   Q8WUK3;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Tonsil;
RA   Strausberg R.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC020236; AAH20236.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
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DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   240 AA;  25977 MW;  921E47DDCA7259F0 CRC64;

  Query Match             42.5%;  Score 247.5;  DB 4;  Length 240;
  Best Local Similarity   44.6%;  Pred. No. 4.1e-17;
  Matches   50;  Conservative   20;  Mismatches   35;  Indels    7;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIY----GKNNRPSGIP 60
              ||| |: |  || ::::||       ||   ||||:||::|  ::     | :|:  |||
Db         23 LTQPPSASAFLGASIKLTCTLSREHSSYTIEWYQQRPGRSPQYIMKVKSDGSHNKGDGIP 82

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH--WVFGGGTELTVL 110
              ||| |||||    ||::  |::|||:|:|    :      |||||||:||||
Db         83 DRFMGSSSGADRYLTLSNLQSDDEAEYHCGESHTIDGQVGWVFGGGTKLTVL 134


RESULT 23
Q8VDD0
ID   Q8VDD0      PRELIMINARY;      PRT;   134 AA.
AC   Q8VDD0;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-MOG Z12 variable light chain (Fragment).
GN   ANTI-MOG KAPPA.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Chernajovsky Y.;
RL   Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RA   Sembi P.;
RT   "Targeting T cells to the CNS.";
RL   Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ416331; CAC94866.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER     134    134
SQ   SEQUENCE   134 AA;  14525 MW;  CFDF8E2236E2D0CF CRC64;

  Query Match             42.2%;  Score 246;  DB 11;  Length 134;
  Best Local Similarity   50.5%;  Pred. No. 2.8e-17;
  Matches   53;  Conservative   12;  Mismatches   36;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              ||| ||: | : |: | :||   |  | |  |||||| :|   ||  :   ||:| |||
Db         26 LTQSPAIMSASPGEKVTMTCSASSSIS-YMHWYQQKPGTSPKRWIYDTSKLASGVPARFS 84

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              || || : ||||:  :||| | |||  |  |   | |||||:| :
Db         85 GSGSGTSYSLTISSMEAEDAATYYCHQR--SSYPWTFGGGTKLEI 127


RESULT 24
Q9UL81
ID   Q9UL81      PRELIMINARY;      PRT;   107 AA.
AC   Q9UL81;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035033; AAD56269.1; -.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     107    107
SQ   SEQUENCE   107 AA;  11501 MW;  070549FDE0754748 CRC64;

  Query Match             42.0%;  Score 245;  DB 4;  Length 107;
  Best Local Similarity   46.2%;  Pred. No. 2.7e-17;
  Matches   49;  Conservative   20;  Mismatches   33;  Indels    4;  Gaps    2;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | ::| ::|  | :||:     | | :|||||||:|| |:||  ::  ||:| ||
Db          3 QMTQSPSSLSASVGDRVTITCRASQSISNYLNWYQQKPGKAPNLLIYAASSLQSGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||  :|||:| |||| | |||    |:     || ||:: :
Db         63 SGSGSGTDFTLTISGLQAEDFATYYCQQSYSA---LTFGPGTKVDI 105


RESULT 25
Q9UL78
ID   Q9UL78      PRELIMINARY;      PRT;   109 AA.
AC   Q9UL78;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035036; AAD56272.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11646 MW;  5F675C52EC7EE197 CRC64;

  Query Match             41.9%;  Score 244;  DB 4;  Length 109;
  Best Local Similarity   49.1%;  Pred. No. 3.5e-17;
  Matches   52;  Conservative   19;  Mismatches   31;  Indels    4;  Gaps    3;
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Qy          6 LTQDP-AVSVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||| |  :|:: |:   ::|:   |: | | :|||||||||| |:||| ::| :||||||
Db          4 LTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRF 63

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   :|||:  : || | |||     ||     |||||:: :
Db         64 SGSGSGTDFTLTISRLEPEDCAVYYCQQYGSS--PLTFGGGTKVEI 107


RESULT 26
Q96SA9
ID   Q96SA9      PRELIMINARY;      PRT;   107 AA.
AC   Q96SA9;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-streptococcal/anti-myosin immunoglobulin kappa light chain
DE   variable region (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98375893; PubMed=9712075;
RA   Adderson E.E., Shikhman A.R., Ward K.E., Cunningham M.W.;
RT   "Molecular analysis of polyreactive monoclonal antibodies from
RT   rheumatic carditis: human anti-N-acetylglucosamine/anti-myosin
RT   antibody V region genes.";
RL   J. Immunol. 161:2020-2031(1998).
DR   EMBL; U96396; AAB68785.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     107    107
SQ   SEQUENCE   107 AA;  11520 MW;  4BB43E9C5B577F16 CRC64;

  Query Match             41.7%;  Score 243;  DB 4;  Length 107;
  Best Local Similarity   45.3%;  Pred. No. 4.3e-17;
  Matches   48;  Conservative   20;  Mismatches   34;  Indels    4;  Gaps    2;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | ::| ::|  | :||:     | | :|||||||:|| |:||  ::  ||:| ||
Db          3 QMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKLLIYAASSLQSGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   :|||:  | || | |||    |:     |||||:: :
Db         63 SGSGSGTDFTLTISSLQPEDFATYYCQQSYST---LTFGGGTKVEI 105


RESULT 27
Q8K1F1
ID   Q8K1F1      PRELIMINARY;      PRT;   114 AA.
AC   Q8K1F1;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-VIPase light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Hyperimmunized spleen;
RA   Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S.;
RT   "Innate proteolytic antibodies: Failed D-VIPase response to the D-
RT   entantiomer of VIP and identification of L-VIPase VL domains.";
RL   Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF516284; AAM64202.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00409; IG; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     114    114
SQ   SEQUENCE   114 AA;  12162 MW;  8BD9833DBF3EEFD1 CRC64;

  Query Match             40.7%;  Score 237;  DB 11;  Length 114;
  Best Local Similarity   49.1%;  Pred. No. 1.9e-16;
  Matches   52;  Conservative   14;  Mismatches   36;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||| ||: | : |: | :||:   |: | |  ||||| | :| | ||  :|  ||:| ||
Db          4 LTQSPAIMSASPGEKVTMTCRASSSVSSSYLHWYQQKSGASPKLWIYSTSNLASGVPARF 63

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| || : ||||:  :||| | |||     |       |||||:| :
Db         64 SGSGSGTSYSLTISSMEAEDAATYYCQQYHSYPR--TPGGGTKLEI 107


RESULT 28
Q8K1F2
ID   Q8K1F2      PRELIMINARY;      PRT;   112 AA.
AC   Q8K1F2;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-VIPase light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Hyperimmunized spleen;
RA   Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S.;
RT   "Innate proteolytic antibodies: Failed D-VIPase response to the D-
RT   entantiomer of VIP and identification of L-VIPase VL domains.";
RL   Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF516283; AAM64201.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00409; IG; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11953 MW;  4716B87FADB543ED CRC64;

  Query Match             40.3%;  Score 235;  DB 11;  Length 112;
  Best Local Similarity   50.5%;  Pred. No. 3e-16;
  Matches   52;  Conservative   12;  Mismatches   35;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              ||| ||: | : |: | :||    |  | |  |:||||| :| | ||  :|  ||:| |||
Db          4 LTQSPAIMSASPGEKVTITCNASSSVS-YMHWFQQKPGTSPKLWIYSTSNLASGVPARFS 62

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTEL 107
              || || : ||||:  :||| | |||  |  |     || ||:|
Db         63 GSGSGTSYSLTISRMEAEDAATYYCQQR--SSYPLTFGAGTKL 103


RESULT 29
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Q920E6
ID   Q920E6      PRELIMINARY;      PRT;   109 AA.
AC   Q920E6;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Pterin-mimicking anti-idiotope kappa chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Atkin J.D., Iape A., Jennings I.G., Horaitis O., Cotton R.G.H.;
RT   "Definition of the Idiotope of Pterin-Mimicking Antibodies Expressed
RT   in Mammalian Cells.";
RL   Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF307938; AAL09422.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11943 MW;  DAD3F98E05DD1501 CRC64;

  Query Match             40.1%;  Score 233.5;  DB 11;  Length 109;
  Best Local Similarity   43.4%;  Pred. No. 4e-16;
  Matches   46;  Conservative   17;  Mismatches   40;  Indels    3;  Gaps    2;

Qy          5 ELTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| || :| ::|:|| :||:       | :||||| |::| |::|       |:| ||
Db          3 QMTQSPASLSASVGETVTITCRASGNIHNYLAWYQQKQGKSPQLLVYNAKTLADGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   || |   | ||   |||    |:   | |||||:| :
Db         63 SGSGSGTQYSLKINSLQPEDFGSYYCQHFWST--PWTFGGGTKLEI 106


RESULT 30
Q9UL85
ID   Q9UL85      PRELIMINARY;      PRT;   109 AA.
AC   Q9UL85;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin kappa chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035029; AAD56265.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11761 MW;  FB1E43E7C7AFACCC CRC64;

  Query Match             40.0%;  Score 233;  DB 4;  Length 109;
  Best Local Similarity   46.3%;  Pred. No. 4.5e-16;
  Matches   50;  Conservative   17;  Mismatches   33;  Indels    8;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :|| || :||: |:   ::|      |   :|||||||||| |:||| : | :||| |||
Db          4 MTQSPATLSVSPGERATLSCWASQSISSNLAWYQQKPGQAPRLLIYGASTRATGIPARFS 63

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW---VFGGGTELTV 109
              || ||   :|||:  |:|| | |:|       | |    |||||:: :
Db         64 GSGSGTEFTLTISSLQSEDFAIYHCQQY----NSWPPLTFGGGTKVEI 107


RESULT 31
Q8K1F3
ID   Q8K1F3      PRELIMINARY;      PRT;   112 AA.
AC   Q8K1F3;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-VIPase light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Hyperimmunized spleen;
RA   Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S.;
RT   "Innate proteolytic antibodies: Failed D-VIPase response to the D-
RT   entantiomer of VIP and identification of L-VIPase VL domains.";
RL   Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF516282; AAM64200.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00409; IG; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  12017 MW;  22DD75B5414CDB18 CRC64;

  Query Match             39.8%;  Score 232;  DB 11;  Length 112;
  Best Local Similarity   48.6%;  Pred. No. 5.9e-16;
  Matches   51;  Conservative   14;  Mismatches   36;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              ||| ||: | : |: | ::|    |  | |  |||||||| :|   ||  :|  ||:| |||
Db          4 LTQSPAIMSASPGEKVTISCSASSSVS-YMYWYQQKPGSSPKPWIYRTSNLASGVPARFS 62

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              || || : ||||:  :||| | |||     |    : |||||:| :
Db         63 GSGSGTSYSLTISSMEAEDAATYYCQQYHS--YPYTFGGGTKLEI 105


RESULT 32
Q8NEK1
ID   Q8NEK1      PRELIMINARY;      PRT;   234 AA.
AC   Q8NEK1;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
```

```
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Strausberg R.;
RL   Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC030813; AAH30813.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003597; Ig_c1.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00407; IGc1; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   234 AA;  25530 MW;  6316E8DEF8D132F8 CRC64;

  Query Match             39.5%;  Score 230.5;  DB 4;  Length 234;
  Best Local Similarity   45.8%;  Pred. No. 2.1e-15;
  Matches   49;  Conservative   18;  Mismatches   33;  Indels    7;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :|| || :||: |:   ::|:     :   :|||| |||:| ||||| ::| ||:| |||
Db         24 MTQSPATLSVSPGERATLSCRASQSVTSNLAWYQQTPGQSPRLVIYGASSRASGVPARFS 83

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW--VFGGGTELTV 109
              || ||   :|||:  |:|| | |||       | |   || ||:| :
Db         84 GSGSGTEFTLTISSLQSEDFAVYYCQQY----NKWPHTFGQGTKLDI 126


RESULT 33
Q8TCD0
ID   Q8TCD0      PRELIMINARY;      PRT;   239 AA.
AC   Q8TCD0;
DT   01-JUN-2002 (TrEMBLrel. 21, Created)
DT   01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical protein.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Strausberg R.;
RL   Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC022362; AAH22362.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   239 AA;  26234 MW;  FACEDC3A3B03871D CRC64;

  Query Match             39.5%;  Score 230;  DB 4;  Length 239;
  Best Local Similarity   42.9%;  Pred. No. 2.4e-15;
  Matches   48;  Conservative   18;  Mismatches   34;  Indels   12;  Gaps    4;

Qy          6 LTQDP-AVSVALGQTVRVTCQGDSLRSY-----YASWYQQKPGQAPVLVIYGKNNRPSGI 59
              :|| | :: | |||   ::|:       |     | :|:||:|||:|  :||  :|| ||:
Db         24 MTQSPLSLPVTLGQPASISCRSTQSLVYSDGNTYLNWFQQRPGQSPRRLIYKVSNRDSGV 83

Qy         60 PDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW--VFGGGTELTV 109
              ||||||| ||   :| ||  :|||   |:|      | ||   || ||:| :
Db         84 PDRFSGSGSGTDFTLKITRVEAEDVGVYFC----MQGTHWPSTFGQGTKLEI 131


RESULT 34
Q9UL70
ID   Q9UL70      PRELIMINARY;      PRT;   108 AA.
AC   Q9UL70;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035044; AAD56280.1; -.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11633 MW;  B7BEDC3E41FCCA37 CRC64;

  Query Match             39.4%;  Score 229.5;  DB 4;  Length 108;
  Best Local Similarity   43.4%;  Pred. No. 1e-15;
  Matches   46;  Conservative   19;  Mismatches   38;  Indels    3;  Gaps    2;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | ::| ::|  | :||:     | | :|||||||: |  :||  :   ||:| ||
Db          3 QMTQSPSSLSASVGDRVTITCRASQGISNYLAWYQQKPGKVPKSLIYAASTLQSGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   :|||:  | || | |||   :|:     || ||:| :
Db         63 SGSGSGTDFTLTISSLQPEDVATYYCQKYNSAPR--TFGPGTKLEI 106


RESULT 35
Q9QYF0
ID   Q9QYF0      PRELIMINARY;      PRT;   298 AA.
AC   Q9QYF0;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   CN 8 scFv.
GN   CN 8.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Balb/c; TISSUE=Spleen;
RX   MEDLINE=20183931; PubMed=10706631;
RA   Shinohara N., Demura T., Fukuda H.;
RT   "Isolation of a vascular cell wall-specific monoclonal antibody
RT   recognizing a cell polarity by using a phage display subtraction
RT   method.";
RL   Proc. Natl. Acad. Sci. U.S.A. 97:2585-2590(2000).
DR   EMBL; AB036341; BAA88633.1; -.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 2.
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DR   PROSITE; PS50835; IG_LIKE; 2.
SQ   SEQUENCE   298 AA;  31867 MW;  E0F96B8A17004317 CRC64;

  Query Match           39.4%;  Score 229.5;  DB 11;  Length 298;
  Best Local Similarity   42.7%;  Pred. No. 3.6e-15;
  Matches   47;  Conservative   15;  Mismatches   37;  Indels   11;  Gaps    3;

Qy          5 ELTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||| || :| ::|:|| :||:       | :||||| |::| |::|       |:| ||
Db        175 ELTQSPASLSASVGETVTITCRASGNIHNYLAWYQQKQGKSPQLLVYNAKTLADGVPSRF 234

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW----VFGGGTELTV 109
              ||| ||   || |   | ||   |||       : |     |||||:| : .
Db        235 SGSGSGTQYSLKINSLQPEDFGSYYCQ------HFWTTPYTFGGGTKLEI 278


RESULT 36
Q9JL78
ID   Q9JL78      PRELIMINARY;      PRT;   101 AA.
AC   Q9JL78;
[redacted] 01-OCT-2000 (TrEMBLrel. 15, Created)
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-myosin immunoglobulin light chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=A.CA;
RX   MEDLINE=20448942; PubMed=10992488;
RA   Malkiel S., Liao L., Cunningham M.W., Diamond B.;
RT   "T-Cell-dependent antibody response to the dominant epitope of
RT   streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive
RT   with cardiac myosin.";
RL   Infect. Immun. 68:5803-5808(2000).
DR   EMBL; AF206028; AAF69326.1; -.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     101    101
[redacted] SEQUENCE   101 AA;  10778 MW;  0A7F65E6A7E6F14D CRC64;

  Query Match           39.3%;  Score 229;  DB 11;  Length 101;
  Best Local Similarity   50.0%;  Pred. No. 1.1e-15;
  Matches   47;  Conservative   14;  Mismatches   31;  Indels    2;  Gaps    2;

Qy         17 GQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGNTASLT 75
              |: : :||    |: | |  |||||| :| |:||  :|  ||:| ||||| || : |||
Db          8 GEKITITCSASSSISSNYLHWYQQKPGFSPKLLIYRTSNLASGVPTRFSGSGSGTSYSLT 67

Qy         76 ITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              |   :||| | |||  : ||   : |||||:| :
Db         68 IGTMEAEDVATYYC-QQGSSIPRYTFGGGTKLEI 100


RESULT 37
Q9UL86
ID   Q9UL86      PRELIMINARY;      PRT;   109 AA.
AC   Q9UL86;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin kappa chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035028; AAD56264.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11928 MW;  243325F72C7DAC83 CRC64;

  Query Match           39.1%;  Score 228;  DB 4;  Length 109;
  Best Local Similarity   47.2%;  Pred. No. 1.5e-15;
  Matches   50;  Conservative   19;  Mismatches   33;  Indels    4;  Gaps    3;

Qy          6 LTQDP-AVSVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||| |  :|:  |:   ::|:   |: | | :|||||||||| |:||| ::| :||||||
Db          4 LTQSPGTLSLFPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLLIYGTSSRATGIPDRF 63

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| |    :|||:  : || | |||     ||   : || ||:: :
Db         64 SGSGSETDFTLTISRLEPEDFAVYYCQQYGSS--IFTFGPGTKVDI 107


RESULT 38
Q8K1F0
ID   Q8K1F0      PRELIMINARY;      PRT;   112 AA.
AC   Q8K1F0;
DT   01-OCT-2002 (TrEMBLrel. 22, Created)
DT   01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-VIPase light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Hyperimmunized spleen;
RA   Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S.;
RT   "Innate proteolytic antibodies: Failed D-VIPase response to the D-
RT   entantiomer of VIP and identification of L-VIPase VL domains.";
RL   Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF516285; AAM64203.1; -.
DR   InterPro; IPR003599; Ig.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00409; IG; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11901 MW;  F6644663201AA239 CRC64;

  Query Match           39.1%;  Score 228;  DB 11;  Length 112;
  Best Local Similarity   48.6%;  Pred. No. 1.5e-15;
  Matches   51;  Conservative   13;  Mismatches   37;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
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                ||| ||: | : |: | :||   |  | | |||||| | :|   ||  :   ||:| |||
Db          4 LTQSPAIMSASPGEKVTMTCSASSSVS-YMHWYQQKSGTSPKRWIYDTSKLASGVPARFS 62

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
               || |||: |||:  : || | |||  :  | |   |||||:| :
Db         63 GSGSGNSYSLTISSTEGEDAATYYC--QQWSSNPPTFGGGTKLEI 105


RESULT 39
Q920E9
ID   Q920E9      PRELIMINARY;      PRT;   111 AA.
AC   Q920E9;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Pterin-mimicking anti-idiotope kappa chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Atkin J.D., Iape A., Jennings I.G., Horaitis O., Cotton R.G.H.;
RT   "Definition of the Idiotope of Pterin-Mimicking Antibodies Expressed
RT   in Mammalian Cells.";
RL   Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF307935; AAL09419.1; -.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  12046 MW;  1E46988AA6858526 CRC64;

  Query Match             38.9%;  Score 226.5;  DB 11;  Length 111;
  Best Local Similarity   47.3%;  Pred. No. 2.1e-15;
  Matches   52;  Conservative   15;  Mismatches   34;  Indels    9;  Gaps    5;

Qy          6 LTQDPA-VSVALGQTVRVTCQGD---SLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||| || ::|:|||   ::|:     |   | |  |||||||| | |:||  :|  ||:|
Db          4 LTQSPASLAVSLGQRATISCRASKSVSTSGYSYMHWYQQKPGQPPKLLIYLASNLESGVP 63

Qy         61 DRFSGSSSSGNTASLTITGAQAEDEADYYCS-SRDSSGNHWVFGGGTELTV 109
               |||||  ||   :| |   : || | |||  ||:     : |||||:| :
Db         64 ARFSGSGSGTDFTLNIHPVEEEDAATYYCQHSRELP---YTFGGGTKLEI 110


RESULT 40
Q8VCP0
ID   Q8VCP0      PRELIMINARY;      PRT;   234 AA.
AC   Q8VCP0;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical 25.7 kDa protein.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Colon;
RA   Strausberg R.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC019474; AAH19474.1; -.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   234 AA;  25702 MW;  102551C58AC2FA9F CRC64;

  Query Match             38.9%;  Score 226.5;  DB 11;  Length 234;
  Best Local Similarity   43.4%;  Pred. No. 5.3e-15;
  Matches   46;  Conservative   17;  Mismatches   40;  Indels    3;  Gaps    2;

Qy          5 ELTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              :||| || :| ::|:|| :||:       | :||||| |::| |::|        |:| ||
Db         23 QLTQSPASLSASVGETVTITCRASENIYSYLAWYQQKQGKSPQLLVYNAKTLADGVPSRF 82

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   || |   | ||   |||  :  ||  : || ||:| :
Db         83 SGSRSGTQFSLKINSLQPEDFGSYYC--QHHSGIPFTFGSGTKLEI 126


RESULT 41
Q9U410
ID   Q9U410      PRELIMINARY;      PRT;   106 AA.
AC   Q9U410;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Monoclonal anti-idiotypic antibody NP30 immunoglobulin light chain
DE   variable region (Fragment).
OS   Schistosoma japonicum (Blood fluke).
OC   Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea; Strigeidida;
OC   Schistosomatoidea; Schistosomatidae; Schistosoma.
OX   NCBI_TaxID=6182;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Song X.T., Feng Z.Q., Qiu Z.N., Li Y.Q., Huang H.L., Guan X.H.;
RT   "Amplification, cloning and sequence analysis of the light chain
RT   variable region gene of monoclonal anti-idiotypic antibody NP30 of
RT   Schistosoma japonicum.";
RL   Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF207620; AAF19434.1; -.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     106    106
SQ   SEQUENCE   106 AA;  11478 MW;  F20F544426BAE63E CRC64;

  Query Match             38.8%;  Score 226;  DB 5;  Length 106;
  Best Local Similarity   49.5%;  Pred. No. 2.2e-15;
  Matches   51;  Conservative   13;  Mismatches   35;  Indels    4;  Gaps    3;

Qy          6 LTQDPAV-SVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              ||| ||: | : |: | :||   |  | | |  || |||| :| |:||  :|  ||:| |||
Db          4 LTQSPAIMSASPGEKVTMTCSASSSVS-YVYWYLQKPGSSPRLLIYDTSNLASGVPVRFS 62

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTEL 107
              || || : ||||:  :|||.| |||    |    : || ||:|
Db         63 GSGSGTSYSLTISRMEAEDAATYYCQQWTS--YPFTFGSGTKL 103


RESULT 42
Q9N0W5
ID   Q9N0W5      PRELIMINARY;      PRT;   109 AA.
AC   Q9N0W5;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-human A33 light chain variable region (Fragment).
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20250927; PubMed=10788485;
RA   Rader C., Ritter G., Nathan S., Elia M., Gout I., Jungbluth A.A.,
RA   Cohen L.S., Welt S., Old L.J., Barbas C.F. III.;
RT   "The rabbit antibody repertoire as a novel source for the generation
RT   of therapeutic human antibodies.";
RL   J. Biol. Chem. 275:13668-13676(2000).
DR   EMBL; AF245502; AAF68449.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11323 MW;  BD8B396EE75F94FB CRC64;

  Query Match             38.7%;  Score 225.5;  DB 6;  Length 109;
  Best Local Similarity   44.8%;  Pred. No. 2.6e-15;
  Matches   47;  Conservative   15;  Mismatches   42;  Indels    1;  Gaps    1;

Qy          6 LTQ-DPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              ||| |::| ::|:|||: |          |||||| : | |:| | ::  :|:| |||
Db          4 LTQTPPSLSPSVGETVRIRCLASDFLFNGVSWYQQKPEKPPTLLISGASDLETGVPPRFS 63

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              || ||   :||| | |||| | |||     |      || || : :
Db         64 GSGSGTDYTLTIGGVQAEDAATYYCLGGYSGSAGLTFGAGTNVEI 108


RESULT 43
Q9ERZ9
ID   Q9ERZ9      PRELIMINARY;      PRT;   107 AA.
AC   Q9ERZ9;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti human TNF-alpha light chain variable region (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Chen P., Deng J.B., Wang Z.L., Han H., Su C.Z.;
RT   "Cloning and sequencing of the light chain fragment of variable region
RT   genes of an anti-hTNF-a monoclonal antibody.";
RL   J. Cell. Mol. Immunol. 12:21-26(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Chen P., Deng J.B., Wang Z.L., Han H., Yao L.B., Su C.Z.;
RT   "Construction and sequencing of the single-chain antibody gene of a
RT   human TNF-alpha specific monoclonal antibody.";
RL   Ti 4 Chun i Ta Hsueh Hsueh Pao 19:373-376(1998).
RN   [3]
RP   SEQUENCE FROM N.A.
RA   Chen P., Deng J.B., Wang Z.L., Han H., Yao L.B., Su C.Z.;
RL   Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF262753; AAG23804.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER     107    107
SQ   SEQUENCE   107 AA;  11784 MW;  2B15EEA6604A26C3 CRC64;

  Query Match             38.5%;  Score 224.5;  DB 11;  Length 107;
  Best Local Similarity   40.4%;  Pred. No. 3.2e-15;
  Matches   44;  Conservative   25;  Mismatches   31;  Indels    9;  Gaps    3;

Qy          6 LTQDP-AVSVALGQTVRVTCQ------GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSG 58
              :|| | :::::::|| | ::|:        : :  | :|||:||||:| |::|  : | ||
Db          1 MTQSPSSLAMSVGQKVTMSCKSSQSVLNSNTQKNYLAWYQKKPGQSPELLVYFASTRESG 60

Qy         59 IPDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTEL 107
              :|||| || ||   :|||:  | || |||:|     :   : || ||:|
Db         61 VPDRFMGSGSGTDFTLTISSVQTEDLADYFCQQHYRT--PFTFGSGTKL 107


RESULT 44
Q9JL76
ID   Q9JL76      PRELIMINARY;      PRT;    97 AA.
AC   Q9JL76;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-myosin immunoglobulin light chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=DBA/2;
RX   MEDLINE=20448942; PubMed=10992488;
RA   Malkiel S., Liao L., Cunningham M.W., Diamond B.;
RT   "T-Cell-dependent antibody response to the dominant epitope of
RT   streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive
RT   with cardiac myosin.";
RL   Infect. Immun. 68:5803-5808(2000).
DR   EMBL; AF206030; AAF69328.1; -.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER      97     97
SQ   SEQUENCE   97 AA;  10542 MW;  C9EE1FFE1F49DA1C CRC64;

  Query Match             38.3%;  Score 223;  DB 11;  Length 97;
  Best Local Similarity   49.0%;  Pred. No. 4e-15;
  Matches   48;  Conservative   15;  Mismatches   33;  Indels    2;  Gaps    2;

Qy         12 VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGNT 71
              :| : |: | :||:  |  | |  |||||| :|   ||  :|  ||:| ||||| || :
Db          1 LSASPGEKVTMTCRASSSVS-YMHWYQQKPGSSPKPWIYATSNLASGVPARFSGSGSGTS 59

Qy         72 ASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||||:  :||| | |||  : ||   : |||||:| :
Db         60 YSLTISRVEAEDAATYYC-QQWSSKYMYTFGGGTKLEI 96


RESULT 45
Q9JL80
ID   Q9JL80      PRELIMINARY;      PRT;   103 AA.
AC   Q9JL80;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-myosin immunoglobulin light chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
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RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RX   MEDLINE=20448942; PubMed=10992488;
RA   Malkiel S., Liao L., Cunningham M.W., Diamond B.;
RT   "T-Cell-dependent antibody response to the dominant epitope of
RT   streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive
RT   with cardiac myosin.";
RL   Infect. Immun. 68:5803-5808(2000).
DR   EMBL; AF206026; AAF69324.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     103    103
SQ   SEQUENCE   103 AA;  11224 MW;  EC87D653DB3AAB21 CRC64;

  Query Match             38.3%;  Score 223;  DB 11;  Length 103;
  Best Local Similarity   43.7%;  Pred. No. 4.4e-15;
  Matches   45;  Conservative   17;  Mismatches   35;  Indels    6;  Gaps    2;

Qy         11 AVSVALGQTVRVTCQGDSLRSYYAS----WYQQKPGQAPVLVIYGKNNRPSGIPDRFSGS 66
              :::|:|||   ::|:      || :    |||||||| | |:||  :|  ||:| |||||
Db          2 SLAVSLGQRATISCRASESVEYYGTSLMQWYQQKPGQPPKLLIYAASNVESGVPARFSGS 61

Qy         67 SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
                ||   || |   : :| | |:|  : |    | |||||:| :
Db         62 GSGTDFSLNIHPVEEDDIAMYFC--QQSRKVPWTFGGGTKLEI 102


RESULT 46
Q9UL83
ID   Q9UL83      PRELIMINARY;      PRT;   108 AA.
AC   Q9UL83;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035031; AAD56267.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11834 MW;  9F9C5A92EBA96EEA CRC64;

  Query Match             38.2%;  Score 222.5;  DB 4;  Length 108;
  Best Local Similarity   45.8%;  Pred. No. 5.2e-15;
  Matches   49;  Conservative   17;  Mismatches   34;  Indels    7;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :|| || :||: |:   ::|:      |   :|||||||||| |:|| : | :||| |||
Db          4 MTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPRLLIYCASTRATGIPARFS 63

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW--VFGGGTELTV 109
              || ||   :|||:  | || | |||       |:|   || ||:: :
Db         64 GSGSGTEFTLTISSLQFEDFAVYYCQHY----NNWPFTFGPGTKVDI 106


RESULT 47
Q9JL74
ID   Q9JL74      PRELIMINARY;      PRT;    99 AA.
AC   Q9JL74;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Anti-myosin immunoglobulin light chain variable region
DE   (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c;
RX   MEDLINE=20448942; PubMed=10992488;
RA   Malkiel S., Liao L., Cunningham M.W., Diamond B.;
RT   "T-Cell-dependent antibody response to the dominant epitope of
RT   streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive
RT   with cardiac myosin.";
RL   Infect. Immun. 68:5803-5808(2000).
DR   EMBL; AF206032; AAF69330.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER      99     99
SQ   SEQUENCE   99 AA;  10939 MW;  3B25D0E784533324 CRC64;

  Query Match             37.9%;  Score 221;  DB 11;  Length 99;
  Best Local Similarity   46.9%;  Pred. No. 6.6e-15;
  Matches   45;  Conservative   15;  Mismatches   34;  Indels    2;  Gaps    1;

Qy         14 VALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSGSSSGNTAS 73
              |: |  | :||:      |   :|||||||:| |:||  :|| :|:||||:||  |   :
Db          5 VSAGDRVTITCKASQSVSNDVAWYQQKPGQSPKLLIYYASNRYTGVPDRFTGSGYGTDFT 64

Qy         74 LTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
                ||:  |||| | |:|    ||     |||||:| :
Db         65 FTISTVQAEDLAVYFCQQDYSSPR--TFGGGTKLEI 98


RESULT 48
Q9UL80
ID   Q9UL80      PRELIMINARY;      PRT;   114 AA.
AC   Q9UL80;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Myosin-reactive immunoglobulin light chain variable region
DE   (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98277139; PubMed=9614934;
RA   Wu X., Liu B., Van der Merwe P.L., Kalis N.N., Berney S.M.,
RA   Young D.C.;
RT   "Myosin-reactive autoantibodies in rheumatic carditis and normal
```

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RT   fetus.";
RL   Clin. Immunol. Immunopathol. 87:184-192(1998).
DR   EMBL; AF035034; AAD56270.1; -.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
FT   NON_TER       1      1
FT   NON_TER     114    114
SQ   SEQUENCE   114 AA;  12775 MW;  070E31E210D1CB01 CRC64;

  Query Match             37.7%;  Score 219.5;  DB 4;  Length 114;
  Best Local Similarity   40.7%;  Pred. No. 1.1e-14;
  Matches   46;  Conservative   19;  Mismatches   35;  Indels   13;  Gaps    4;

Qy          6 LTQDP-AVSVALGQTVRVTCQGDSLRSY-----YASWYQQKPGQAPVLVIYGKNNRPSGI 59
              :|| | :: | | |   ::|:       |      | :|:||:|||:|  :||  :|| ||:
Db          4 MTQSPLSLPVTLRQPASISCRSSQSPVYSDGNTYLNWFQQRPGQSPRRLIYKVSNRDSGV 63

Qy         60 PDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH---WVFGGGTELTV 109
              ||||||| ||   :| |:  :|||   |||      | |   | || ||:: :
Db         64 PDRFSGSGSGTDFTLKISRVEAEDVGVYYC----MQGTHWPPWTFGQGTKVEI 112


RESULT 49
Q99M37
ID   Q99M37      PRELIMINARY;      PRT;   238 AA.
AC   Q99M37;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Hypothetical 26.3 kDa protein.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Strausberg R.;
RL   Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC002035; AAH02035.1; -.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   238 AA;  26344 MW;  FB2B06A0B801330A CRC64;

  Query Match             37.6%;  Score 219;  DB 11;  Length 238;
  Best Local Similarity   42.9%;  Pred. No. 3.1e-14;
  Matches   51;  Conservative   20;  Mismatches   34;  Indels   14;  Gaps    5;

Qy          1 AFSSE--LTQDP-AVSVALGQTVRVTCQGD-----SLRSYYASWYQQKPGQAPVLVIYGK 52
              | ||:  :|| | :: |:||    ::|:       |  : |  || |||||:| |:||
Db         16 ASSSDVVMTQTPLSLPVSLGDQASISCRSSQSIVHSNGNTYLEWYLQKPGQSPKLLIYKV 75

Qy         53 NNRPSGIPDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH--WVFGGGTELTV 109
              :|| ||:|||||| ||   :| |:  :|||   |||      |:|  : || ||:| :
Db         76 SNRFSGVPDRFSGSGSGTDFTLKISRVEAEDLGVYYC----FQGSHVPYTFGSGTKLEI 130


RESULT 50
Q9R1A5
ID   Q9R1A5      PRELIMINARY;      PRT;   214 AA.
AC   Q9R1A5;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE   Kappa light chain of Mab7 (Fragment).
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Wilde K.G., Yu X., Ekramoddoullah A.K.M., Misra S.;
RT   "Cloning of cDNAs encoding for anti-white pine blister rust monoclonal
RT   antibody (Mab 7, its light and heavy chains) and construction of a
RT   single chain antibody (scFV).";
RL   Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF152371; AAD40242.1; -.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 2.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 2.
DR   PROSITE; PS00290; IG_MHC; 1.
FT   NON_TER       1      1
FT   NON_TER     214    214
SQ   SEQUENCE   214 AA;  23922 MW;  52BA205FDE995E2A CRC64;

  Query Match             37.5%;  Score 218.5;  DB 11;  Length 214;
  Best Local Similarity   42.5%;  Pred. No. 3.1e-14;
  Matches   45;  Conservative   18;  Mismatches   40;  Indels    3;  Gaps    2;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              :||| | ::  :||: | :||:     : | ||:|||||::|  :||  |    |:| ||
Db          3 QLTQSPSSMYASLGERVTITCKASQDINSYLSWFQQKPGKSPKTLIYRANRLVDGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   ||||:  : ||   |||   |     : || ||:| :
Db         63 SGSGSGQDYSLTISSLEYEDMGIYYCLQYDEF--PFTFGSGTKLEI 106


Search completed: November 26, 2003, 13:41:03
Job time : 30.9359 secs
```

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: November 26, 2003, 13:30:14 ; Search time 9.48718 Seconds
(without alignments)
550.212 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 127863 seqs, 47026705 residues

[redacted] number of hits satisfying chosen parameters: 127863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	510	87.5	108	1	LV3A_HUMAN	P01714 homo sapien
2	367	63.0	107	1	LV4C_HUMAN	P01717 homo sapien
3	365	62.6	111	1	LV3B_HUMAN	P80748 homo sapien
4	358	61.4	108	1	LV5A_HUMAN	P01719 homo sapien
5	357	61.2	106	1	LV4A_HUMAN	P01715 homo sapien
6	350	60.0	106	1	LV4E_HUMAN	P06889 homo sapien
7	348	59.7	106	1	LV4B_HUMAN	P01716 homo sapien
8	344	59.0	130	1	LV1G_HUMAN	P06316 homo sapien
9	342	58.7	111	1	LV2F_HUMAN	P01709 homo sapien
10	333	57.1	106	1	LV4D_HUMAN	P01718 homo sapien
11	332	56.9	111	1	LV2C_HUMAN	P01706 homo sapien
12	328	56.3	111	1	LV2H_HUMAN	P01711 homo sapien
13	327	56.1	111	1	LV1D_HUMAN	P01702 homo sapien
14	326.5	56.0	112	1	LV2K_HUMAN	P04209 homo sapien
15	325	55.7	111	1	LV2G_HUMAN	P01710 homo sapien
16	323	55.4	111	1	LV6C_HUMAN	P06317 homo sapien
17	319	54.7	111	1	LV7A_HUMAN	P01720 homo sapien
18	318	54.5	109	1	LV1F_HUMAN	P04208 homo sapien
19	313	53.7	111	1	LV1C_HUMAN	P01701 homo sapien
20	311	53.3	111	1	LV2I_HUMAN	P01712 homo sapien
21	310	53.2	109	1	LV2E_HUMAN	P01708 homo sapien
22	309.5	53.1	112	1	LV6A_HUMAN	P01721 homo sapien
23	306.5	52.6	131	1	LV6E_HUMAN	P06319 homo sapien
24	306	52.5	111	1	LV2A_HUMAN	P01704 homo sapien
25	301.5	51.7	110	1	LV2J_HUMAN	P01713 homo sapien
26	300	51.5	109	1	LV1I_HUMAN	P06888 homo sapien
27	298	51.1	111	1	LV2B_HUMAN	P01705 homo sapien
28	297	50.9	111	1	LV6D_HUMAN	P06318 homo sapien
29	295	50.6	111	1	LV2D_HUMAN	P01707 homo sapien
30	293.5	50.3	112	1	LV6B_HUMAN	P01722 homo sapien
31	292.5	50.2	112	1	LV1B_HUMAN	P01700 homo sapien
32	292	50.1	113	1	LV1_CHICK	P04210 gallus gall
33	291.5	50.0	112	1	LV1H_HUMAN	P06887 homo sapien
34	283	48.5	111	1	LV1A_HUMAN	P01699 homo sapien
35	282.5	48.5	129	1	LV1B_MOUSE	P01724 mus musculu
36	274.5	47.1	110	1	KV13_RABIT	P01694 oryctolagus
37	270.5	46.4	129	1	LV1D_MOUSE	P01726 mus musculu
38	270.5	46.4	129	1	LV1E_MOUSE	P01727 mus musculu
39	268.5	46.1	110	1	LV1C_MOUSE	P01725 mus musculu
40	263	45.1	111	1	LV2L_HUMAN	P80422 homo sapien
41	261	44.8	117	1	KV10_RABIT	P01691 oryctolagus
42	254	43.6	103	1	LV1E_HUMAN	P01703 homo sapien
43	251.5	43.1	136	1	KV5B_MOUSE	P01634 mus musculu
44	247.5	42.5	108	1	KV1M_HUMAN	P01605 homo sapien
45	244.5	41.9	110	1	KV01_RABIT	P01682 oryctolagus

ALIGNMENTS

RESULT 1
LV3A_HUMAN
ID LV3A_HUMAN STANDARD; PRT; 108 AA.
AC P01714;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 15-SEP-2003 (Rel. 42, Last annotation update)
DE Ig lambda chain V-III region SH.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE.
RX MEDLINE=70166723; PubMed=4909564;
RA Titani K., Wikler M., Shinoda T., Putnam F.W.;
RT "The amino acid sequence of a lambda type Bence-Jones protein. 3. The
RT complete amino acid sequence and the location of the disulfide
RT bridges.";
RL J. Biol. Chem. 245:2171-2176(1970).
CC -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR PIR; A01980; L3HUSH.
DR HSSP; P80748; 2LOI.
DR GO; GO:0005576; C:extracellular; NAS.
DR GO; GO:0003823; F:antigen binding activity; NAS.
DR GO; GO:0006955; P:immune response; NAS.
DR InterPro; IPR007110; Ig-like.
DR InterPro; IPR003006; Ig_MHC.
DR InterPro; IPR003596; Ig_v.
DR Pfam; PF00047; ig; 1.
DR SMART; SM00406; IGv; 1.
DR PROSITE; PS50835; IG_LIKE; 1.
KW Immunoglobulin V region; Bence-Jones protein.
FT DOMAIN 1 97 IG-LIKE.
FT DISULFID 21 86
FT NON_TER 108 108
SQ SEQUENCE 108 AA; 11392 MW; E7E1229586411A56 CRC64;

Query Match 87.5%; Score 510; DB 1; Length 108;
Best Local Similarity 88.9%; Pred. No. 1.2e-44;
Matches 96; Conservative 8; Mismatches 4; Indels 0; Gaps 0;

```
Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||||||||||||||||:|||||||| | |:||||||||||:|||||:||||||||||
Db          1 SELTQDPAVSVALGQTVRITCQGDSLRGYDAAWYQQKPGQAPLLVIYGRNNRPSGIPDRF 60

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||:|||||||||||||||||:|||||| | :|||||:|||||
Db         61 SGSSSGHTASLTITGAQAEDEADYYCNSRDSSGKHVLFGGGTKLTVLG 108
```

RESULT 2
LV4C_HUMAN
ID LV4C_HUMAN STANDARD; PRT; 107 AA.
AC P01717;

```
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-IV region Hil.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=78187276; PubMed=418804;
RA   Lopez de Castro J.A., Chiu Y.-Y.H., Poljak R.J.;
RT   "Amino acid sequence of the variable region of the light (lambda)
RT   chain from human myeloma cryoimmunoglobulin IgG Hil.";
RL   Biochemistry 17:1718-1723(1978).
CC   -!- MISCELLANEOUS: THE SEQUENCE OF THE C REGION IS APPARENTLY
CC       IDENTICAL WITH THAT OF HUMAN SH LAMBDA CHAIN EXCEPT IN HAVING
CC       155-ILE (HIL NUMBERING) INSTEAD OF VAL.
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01983; L4HUHL.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     97       IG-LIKE.
FT   NON_TER     107    107
SQ   SEQUENCE   107 AA;  11517 MW;  A5C8AFFE0C0C590A CRC64;

  Query Match             63.0%;  Score 367;  DB 1;  Length 107;
  Best Local Similarity   64.2%;  Pred. No. 3e-30;
  Matches   70;  Conservative   16;  Mismatches   21;  Indels    2;  Gaps    1;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              | |||| |:|||: ||| |:||  ::| : || |||||||:|||:|||    |||||| |
Db          1 SYELTQPPSVSVSPGQTARITCSANALPNQYAYWYQQKPGRAPVMVIYKDTQRPSGIPQR 60

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || |:|| | :|||:| |||||||||| : |:| :  :|||||:|||||
Db         61 FSSSTSGTTVTLTISGVQAEDEADYYCQAWDNSAS--IFGGGTKLTVLG 107


RESULT 3
LV3B_HUMAN
ID   LV3B_HUMAN     STANDARD;      PRT;   111 AA.
AC   P80748;
DT   15-JUL-1999 (Rel. 38, Created)
DT   15-JUL-1999 (Rel. 38, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-III region LOI.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE, SUBUNIT, DISEASE, AND 3D-STRUCTURE MODELLING.
RC   TISSUE=Urine;
RX   MEDLINE=99441384; PubMed=10510403;
RA   Jokiranta T.S., Solomon A., Pangburn M.K., Zipfel P.F., Meri S.;
RT   "Nephritogenic lambda light chain dimer: a unique human
RT   miniautoantibody against complement factor H.";
RL   J. Immunol. 163:4590-4596(1999).
CC   -!- FUNCTION: ACTIVATES THE ALTERNATIVE COMPLEMENT PATHWAY BY BINDING
CC       TO THE SHORT CONSENSUS REPEAT DOMAIN 3 (SCR3) OF FACTOR H.
CC   -!- SUBUNIT: Homodimer.
CC   -!- DISEASE: THE BLOCKING OF FACTOR H BY LOI PROTEIN LEADS TO THE
CC       DEVELOPMENTAL OF MEMBRANOPROLIFERATIVE GLOMERULONEPHRITIS (MPGN).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PDB; 2LOI; 29-DEC-99.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; 3D-structure.
FT   DOMAIN        1     97       IG-LIKE.
FT   BINDING      15     15       SCR3.
FT   BINDING      25     25       SCR3.
FT   BINDING      29     29       SCR3.
FT   BINDING      48     51       SCR3.
FT   BINDING      94     94       SCR3.
FT   DISULFID     21     86       BY SIMILARITY.
FT   STRAND        4      4
FT   STRAND        8      8
FT   TURN         13     14
FT   STRAND       16     22
FT   STRAND       32     37
FT   TURN         38     40
FT   STRAND       41     46
FT   TURN         49     50
FT   STRAND       54     54
FT   TURN         55     55
FT   TURN         58     59
FT   STRAND       60     61
FT   STRAND       64     65
FT   TURN         66     67
FT   STRAND       68     74
FT   TURN         78     79
FT   STRAND       82     88
FT   TURN         91     93
FT   STRAND       97     98
FT   STRAND      102    104
FT   TURN        107    108
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11935 MW;  69498EBEFDE82053 CRC64;

  Query Match             62.6%;  Score 365;  DB 1;  Length 111;
  Best Local Similarity   67.6%;  Pred. No. 4.9e-30;
  Matches   71;  Conservative   12;  Mismatches   22;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||| |:| |:|| |: : |    ||||||||||||||    :||||||:||||
Db          3 LTQPPSVSVAPGETARLTCGGNDIGSESVHWYQQKPGQAPVLVIYFDRDRPSGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |:||||:|||:  :| |||||||   |||  | ||||||:||||
Db         63 SNSGNTATLTISRVEAGDEADYYCQLWDSSSEHVVFGGGTKLTVL 107


RESULT 4
LV5A_HUMAN
ID   LV5A_HUMAN     STANDARD;      PRT;   108 AA.
AC   P01719;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-V region DEL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=75112179; PubMed=4452363;
RA   Eulitz M.;
```

```
RT   "A new subgroup of human L-chains of the lambda-type. Primary
RT   structure of Bence-Jones protein DEL.";
RL   Eur. J. Biochem. 50:49-69(1974).
CC   -!- MISCELLANEOUS: THIS IS THE FIRST SEQUENCED V REGION OF LAMBDA
CC       CHAIN SUBGROUP V.
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01985; L5HUDL.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN        1     97       IG-LIKE.
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11342 MW;  B8E8ED9C09C9E451 CRC64;

  Query Match             61.4%;  Score 358;  DB 1;  Length 108;
  Best Local Similarity   64.2%;  Pred. No. 2.4e-29;
  Matches   68;  Conservative   14;  Mismatches   24;  Indels    0;  Gaps    0;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              |:| |:|||| ||| |:|| || :      ||||||||||||::  |:||:|||:||||
Db          3 LSQPPSVSVAPGQTARITCGGDGIGGKSVHWYQQKPGQAPVLVVHEDNDRPAGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:||||:|||:  :| |||||||    |     | ||||||:|||||
Db         63 SNSGNTAALTISRVEAGDEADYYCEVWDDRTAHVVFGGGTKLTVLG 108


RESULT 5
LV4A_HUMAN
ID   LV4A_HUMAN     STANDARD;      PRT;   106 AA.
AC   P01715;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-IV region Bau.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=75059189; PubMed=4435717;
RA   Baczko K., Braun D., Hilschmann N.;
RT   "Pattern of antibody structure, the primary structure of monoclonal
RT   immunoglobulin L-chain of the lambda-type, subgroup IV (Bence-Jones
RT   protein Bau.).";
RL   Hoppe-Seyler's Z. Physiol. Chem. 355:131-154(1974).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01981; L4HUBU.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN        1    102       IG-LIKE.
FT   NON_TER     106    106
SQ   SEQUENCE   106 AA;  11305 MW;  4B6A688E0EC46571 CRC64;

  Query Match             61.2%;  Score 357;  DB 1;  Length 106;
  Best Local Similarity   65.1%;  Pred. No. 3e-29;
  Matches   69;  Conservative   13;  Mismatches   22;  Indels    2;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |::||: |||  :|| || |   |  ||||||||:||||||  : ||||||:||||
Db          3 LTQPPSLSVSPGQTASITCSGDKLGEQYVCWYQQKPGQSPVLVIYHDSKRPSGIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |:|| ||:|||:| || ||||||| : ||     :|||||:|||||
Db         63 SNSGTTATLTISGTQAMDEADYYCQAWDS--YTVIFGGGTKLTVLG 106


RESULT 6
LV4E_HUMAN
ID   LV4E_HUMAN     STANDARD;      PRT;   106 AA.
AC   P06889;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-IV region MOL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=87156515; PubMed=3103603;
RA   Holm E., Sletten K., Husby G.;
RT   "Structural studies of a carbohydrate-containing
RT   immunoglobulin-lambda-light-chain amyloid-fibril protein (AL) of
RT   variable subgroup III.";
RL   Biochem. J. 239:545-551(1986).
CC   -!- MISCELLANEOUS: RESIDUES 29-30 AND 56-58 WERE POSITIONED BY
CC       HOMOLOGY.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A26019; L4HUML.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Amyloid; Glycoprotein.
FT   DOMAIN        1    103       IG-LIKE.
FT   DISULFID     21     86       BY SIMILARITY.
FT   CARBOHYD     90     90       N-LINKED (GLCNAC. . .) (PROBABLE).
FT   NON_TER     106    106
SQ   SEQUENCE   106 AA;  11272 MW;  D9BB77D4797D2123 CRC64;

  Query Match             60.0%;  Score 350;  DB 1;  Length 106;
  Best Local Similarity   62.6%;  Pred. No. 1.5e-28;
  Matches   67;  Conservative   17;  Mismatches   21;  Indels    2;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:|||: |||  ::| || |   |  |||| |||:|:|||| : ||||||:|||
Db          2 ELTQPPSVSVSPGQTATISCSGDKLGESYYDWYQQSPGQSPLLVIYEGDKRPSGIPZRFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||:|||||:|||:| :: ||||||| : :||    :|||||:|||||
Db         62 GSNSGNTATLTISGTESMDEADYYCQAWNSSS--VLFGGGTKLTVLG 106


RESULT 7
LV4B_HUMAN
ID   LV4B_HUMAN     STANDARD;      PRT;   106 AA.
AC   P01716;
DT   21-JUL-1986 (Rel. 01, Created)
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DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-IV region X.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=69088380; PubMed=4883841;
RA   Milstein C., Clegg J.B., Jarvis J.M.;
RT   "Immunoglobulin lambda-chains. The complete amino acid sequence of a
RT   Bence-Jones protein.";
RL   Biochem. J. 110:631-652(1968).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01982; L4HUX.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN        1    102       IG-LIKE.
FT   NON_TER     106    106
SQ   SEQUENCE   106 AA;  11334 MW;  24D04344AA812855 CRC64;

  Query Match             59.7%;  Score 348;  DB 1;  Length 106;
  Best Local Similarity   65.1%;  Pred. No. 2.4e-28;
  Matches   69;  Conservative   11;  Mismatches   24;  Indels    2;  Gaps    1;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :||| |:|||: ||| :|| || |      ||||:|||:||||||  | | ||||:|||
Db          2 DLTQPPSVSVSPGQTASITCSGDKLGDKDVCWYQQRPGQSPVLVIYQDNQRSSGIPERFS 61

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||:|||||:|||:| || ||||||| : ||     |||||| ||||
Db         62 GSNSGNTATLTISGTQAMDEADYYCQAWDSMS--VVFGGGTRLTVL 105


RESULT 8
LV1G_HUMAN
ID   LV1G_HUMAN     STANDARD;      PRT;   130 AA.
AC   P06316;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig lambda chain V-I region BL2 precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=85062823; PubMed=6095199;
RA   Tsujimoto Y., Croce C.M.;
RT   "Molecular cloning of a human immunoglobulin lambda chain variable
RT   sequence.";
RL   Nucleic Acids Res. 12:8407-8414(1984).
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; X01147; CAA25598.1; -.
DR   PIR; A01966; L1HUBL.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    130       IG LAMBDA CHAIN V-I REGION BL2.
FT   DOMAIN       20    115       V SEGMENT.
FT   DOMAIN      116    130       J SEGMENT.
FT   DISULFID     41    108       BY SIMILARITY.
FT   NON_TER     130    130
SQ   SEQUENCE   130 AA;  13564 MW;  FA44BB17D3A55EBF CRC64;

  Query Match             59.0%;  Score 344;  DB 1;  Length 130;
  Best Local Similarity   61.8%;  Pred. No. 7.7e-28;
  Matches   68;  Conservative   13;  Mismatches   27;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |:|| | || | ::| | |  : : | ||||| || || |:||  | |||||||
Db         21 SVLTQPPSVSAAPGQKVTISCSGSSSNIGNDYVSWYQQVPGTAPKLLIYDNNKRPSGIPD 80

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :|:| ||| |  ||||||| :.::| : |||||||:|||||
Db         81 RFSGSKSGTSATLGITGLQTGDEADYYCGTWNNSLSGWVFGGGTKLTVLG 130


RESULT 9
LV2F_HUMAN
ID   LV2F_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01709;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region MGC.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=75013804; PubMed=4415202;
RA   Fett J.W., Deutsch H.F.;
RT   "Primary structure of the Mcg lambda chain.";
RL   Biochemistry 13:4102-4114(1974).
RN   [2]
RP   LAMBDA CHAIN GENES.
RX   MEDLINE=76093781; PubMed=812801;
RA   Fett J.W., Deutsch H.F.;
RT   "A new lambda-chain gene.";
RL   Immunochemistry 12:643-652(1975).
RN   [3]
RP   X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS).
RA   Edmundson A.B., Ely K.R., Abola E.E., Schiffer M.,
RA   Panagiotopoulos N.;
RT   "Rotational allomerism and divergent evolution of domains in
RT   immunoglobulin light chains.";
RL   Biochemistry 14:3953-3961(1975).
RN   [4]
RP   X-RAY CRYSTALLOGRAPHY.
RX   MEDLINE=90133913; PubMed=2515285;
RA   Ely K.R., Herron J.N., Harker M., Edmundson A.B.;
RT   "Three-dimensional structure of a light chain dimer crystallized in
RT   water. Conformational flexibility of a molecule in two crystal
RT   forms.";
RL   J. Mol. Biol. 210:601-615(1989).
```

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CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- MISCELLANEOUS: THE MCG-TYPE C REGION APPEARS TO BE CORRELATED WITH
CC       A VERY UNUSUAL V-REGION SUBSTITUTION, 103-THR ABOVE FOR GLY,
CC       SUGGESTING THAT THE V-C JOINING MECHANISM IS NOT ALWAYS RANDOM.
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE KERN+ AND MCG+
CC       MARKERS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A90381; L2HUMC.
DR   PDB; 2MCG; 15-JUL-92.
DR   PDB; 1A8J; 17-JUN-98.
DR   PDB; 1DCL; 15-MAY-97.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein; 3D-structure;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    108       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   STRAND        5      5
FT   STRAND       10     12
FT   STRAND       18     23
FT   TURN         26     32
FT   STRAND       36     40
FT   TURN         42     43
FT   STRAND       50     51
FT   TURN         52     54
FT   STRAND       55     55
FT   TURN         62     63
FT   STRAND       66     68
FT   STRAND       72     77
FT   HELIX        82     84
FT   STRAND       86     93
FT   STRAND       99    101
FT   STRAND      105    109
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11558 MW;  7CC1D6E2FA3377BA CRC64;

  Query Match             58.7%;  Score 342;  DB 1;  Length 111;
  Best Local Similarity   62.2%;  Pred. No. 1e-27;
  Matches   69;  Conservative   16;  Mismatches   22;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |: | :|||:| ::| | |  :  | | |||||  |:|| ::||  | ||||:|
Db          2 SALTQPPSASGSLGQSVTISCTGTSSDVGGYNYVSWYQQHAGKAPKVIIYEVNKRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||| ||||||||::| |||||||||||| : | | :||| ||::||||
Db         62 DRFSGSKSGNTASLTVSGLQAEDEADYYCSSYEGSDN-FVFGTGTKVTVLG 111


RESULT 10
LV4D_HUMAN
ID   LV4D_HUMAN     STANDARD;      PRT;   106 AA.
AC   P01718;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-IV region Kern.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=71150336; PubMed=5549568;
RA   Ponstingl H., Hess M., Hilschmann N.;
RT   "Structural rule of antibodies. Primary structure of a monoclonal
RT   immunoglobulin-L-chain of the lambda type, subgroup IV (Bence-Jones-
RT   protein Kern). V. The complete amino acid sequence and its genetic
RT   interpretation.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 352:247-266(1971).
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE KERN+ MARKER.
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01984; L4HUKN.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN        1    102       IG-LIKE.
FT   DISULFID     21     86       BY SIMILARITY.
FT   NON_TER     106    106
SQ   SEQUENCE   106 AA;  11277 MW;  C8B4A05B9CB43CBE CRC64;

  Query Match             57.1%;  Score 333;  DB 1;  Length 106;
  Best Local Similarity   61.0%;  Pred. No. 7.7e-27;
  Matches   64;  Conservative   19;  Mismatches   20;  Indels    2;  Gaps    1;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFSG 65
              ||| |:|||: ||| :|| ||:|   : ||:||:|||:|:|||| : ||| ||:||||
Db          3 LTQPPSVSVSPGQTAVITCSGDNLEKTFVSWFQQRPGQSPLLVIYHTSERPSEIPERFSG 62

Qy         66 SSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||| ||:|||:|||: ||||:| : |:     :|||||:||||
Db         63 SSSGATATLTISGAQSVDEADYFCQTWDTITA--IFGGGTKLTVL 105


RESULT 11
LV2C_HUMAN
ID   LV2C_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01706;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region BOH.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=75115478; PubMed=804002;
RA   Kohler H., Rudofsky S., Kluskens L.;
RT   "The primary structure of a human lambda II chain.";
RL   J. Immunol. 114:415-421(1975).
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE OZ+ MARKER.
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01972; L2HUBH.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
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FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11650 MW;  94520309932623E8 CRC64;

  Query Match             56.9%;  Score 332;  DB 1;  Length 111;
  Best Local Similarity   61.6%;  Pred. No. 1e-26;
  Matches   69;  Conservative   13;  Mismatches   24;  Indels    6;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSL---RSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:| ::| | |     ::: ||||| ||:|| |:||| | ||||:|
Db          2 SALTQPRSVSGSPGQSVTISCAGTSSDVGGNHFVSWYQQHPGKAPKLIIYGVNKRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH-WVFGGGTELTVLG 111
              ||||| |||||||||:| |||||| ||| |   :|   ||||||| |||||
Db         62 YRFSGSKSGNTASLTISGLQAEDEAHYYCCS--YAGRFTWVFGGGTNLTVLG 111


RESULT 12
LV2H_HUMAN
ID   LV2H_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01711;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region VIL.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=71215142; PubMed=5087637;
RA   Ponstingl H., Hilschmann N.;
RT   "Structural rule of antibodies. Complete primary structure of a
RT   monoclonal immunoglobin L chain of the lambda type, subgroup II
RT   (Bence Jones protein VIL).";
RL   Hoppe-Seyler's Z. Physiol. Chem. 352:859-877(1971).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01977; L2HUVL.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN       1    100       IG-LIKE.
FT   DISULFID    22     90       BY SIMILARITY.
FT   NON_TER    111    111
SQ   SEQUENCE   111 AA;  11445 MW;  3913736B3EF367E0 CRC64;

  Query Match             56.3%;  Score 328;  DB 1;  Length 111;
  Best Local Similarity   63.1%;  Pred. No. 2.6e-26;
  Matches   70;  Conservative   12;  Mismatches   25;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| :|||:: ::| | |  :  | | ||:|| || || |:|    |||||:
Db          2 SALTQPASVSGSLGQSITISCTGTSSDVGGYNYVSWFQQHPGTAPKLIISEVRNRPSGVS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||| | |||||||:| ||||||||||||  || |  ||||||:|||||
Db         62 DRFSGSKSANTASLTISGLQAEDEADYYCSSYTSS-NSVVFGGGTKLTVLG 111


RESULT 13
LV1D_HUMAN
ID   LV1D_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01702;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region NIG-64.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=83186114; PubMed=6404900;
RA   Kametani F., Takayasu T., Suzuki S., Shinoda T., Okuyama T.,
RA   Shimizu A.;
RT   "Comparative studies on the structure of the light chains of human
RT   immunoglobulins. IV. Assignment of a subsubgroup.";
RL   J. Biochem. 93:421-429(1983).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01965; L1HUNG.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN       1    105       IG-LIKE.
FT   MOD_RES      1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID    22     89       BY SIMILARITY.
FT   NON_TER    111    111
SQ   SEQUENCE   111 AA;  11454 MW;  A21C6121C18A61E0 CRC64;

  Query Match             56.1%;  Score 327;  DB 1;  Length 111;
  Best Local Similarity   60.0%;  Pred. No. 3.3e-26;
  Matches   66;  Conservative   12;  Mismatches   30;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |:|| | || | ::| | |  :   : ||||| || || |:||  | |||||||
Db          2 SVLTQPPSVSAAPGQEVTISCSGSSSNIGDNFVSWYQQLPGTAPKLLIYDNNKRPSGIPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :|:| ||| |  ||||||| : ||| :  :||||| :||||
Db         62 RFSGSKSGTSATLGITGLQTGDEADYYCGTWDSSLSVGMFGGGTRVTVLG 111


RESULT 14
LV2K_HUMAN
ID   LV2K_HUMAN     STANDARD;      PRT;   112 AA.
AC   P04209;
DT   20-MAR-1987 (Rel. 04, Created)
DT   20-MAR-1987 (Rel. 04, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region NIG-84.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=85204383; PubMed=3922791;
RA   Tonoike H., Kametani F., Hoshi A., Shinoda T., Isobe T.;
RT   "Amino acid sequence of an amyloidogenic Bence Jones protein in
RT   myeloma-associated systemic amyloidosis.";
RL   FEBS Lett. 185:139-141(1985).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN ISOLATED FROM AN
CC       INDIVIDUAL WITH MYELOMA-ASSOCIATED SYSTEMIC AMYLOIDOSIS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01971; L2HUNG.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
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DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Amyloid; Bence-Jones protein.
FT   DOMAIN        1    102       IG-LIKE.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11581 MW;  988FEF363AE1E4F3 CRC64;

  Query Match             56.0%;  Score 326.5;  DB 1;  Length 112;
  Best Local Similarity   59.5%;  Pred. No. 3.7e-26;
  Matches   66;  Conservative   18;  Mismatches   24;  Indels    3;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:: ::| |    :  | : ||||| ||:|| |:||  |:|||||
[redacted]  2 SALTQPASVSGSPGQSITISCTGTTSDVGGYDFVSWYQQHPGKAPKLLIYDVNSRPSGIS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              :||||| |||||||||:| ||||||||||||  :: :  ||||||:|:|||
Db         62 NRFSGSKSGNTASLTISGLQAEDEADYYCSSFTTTNSRAVFGGGTKLSVLG 112


RESULT 15
LV2G_HUMAN
ID   LV2G_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01710;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region BO.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=71103825; PubMed=5532228;
RA   Wikler M., Putnam F.W.;
RT   "Amino acid sequence of human lambda chains. 3. Tryptic peptides,
RT   chymotryptic peptides, and sequence of protein Bo.";
RL   J. Biol. Chem. 245:4488-4507(1970).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
[redacted]-!- SIMILARITY: Contains 1 immunoglobulin-like domain.
[redacted]PIR; A01976; L2HUBO.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11785 MW;  92F5A1BF72421BAC CRC64;

  Query Match             55.7%;  Score 325;  DB 1;  Length 111;
  Best Local Similarity   60.0%;  Pred. No. 5.2e-26;
  Matches   66;  Conservative   16;  Mismatches   24;  Indels    4;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSL---RSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |: | : ||:| ::| | |     : | ||||| ||:|| |||:  : ||||:|
Db          2 SALTQPPSASGSPGQSVTISCTGTSSDVGDNKYVSWYQQHPGRAPKLVIFEVSQRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||||| | ||||||::| :||||||||||      |::||||||:||||
Db         62 DRFSGSKSDNTASLTVSGLRAEDEADYYCSSY-VDNNNFVFGGGTKLTVL 110


RESULT 16
LV6C_HUMAN
ID   LV6C_HUMAN     STANDARD;      PRT;   111 AA.
AC   P06317;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-VI region SUT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RA   Solomon A., Kyle R.A., Frangione B.;
RT   "Light chain variable region subgroups of monoclonal immunoglobulins
RT   in amyloidosis AL.";
RL   (In) Glenner G.G., Osserman E.F., Benditt E.P., Calkins E.,
RL   Cohen A.S., Zucker-Franklin D. (eds.);
RL   Amyloidosis, pp.449-462, Plenum Press, New York (1986).
DR   PIR; A01988; L6HUST.
DR   PDB; 1CD0; 06-MAR-00.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; 3D-structure.
FT   DOMAIN        1     22       FRAMEWORK-1.
FT   DOMAIN       23     35       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       36     50       FRAMEWORK-2.
FT   DOMAIN       51     57       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       58     91       FRAMEWORK-3.
FT   DOMAIN       92    100       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      101    111       FRAMEWORK-4.
FT   DISULFID     22     91       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  12247 MW;  0941DD547D983598 CRC64;

  Query Match             55.4%;  Score 323;  DB 1;  Length 111;
  Best Local Similarity   58.2%;  Pred. No. 8.3e-26;
  Matches   64;  Conservative   15;  Mismatches   25;  Indels    6;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTC--QGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||  :|| : |:|| ::|     ::  ||  ||||:||:||  ||:    ||||:||||
Db          4 LTQPHSVSESPGKTVIISCTRSDGTIAGYYVQWYQQRPGRAPTTVIFEDTQRPSGVPDRF 63

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||   | |:|||||:| | |||||||| | |   :|||||||:|||||
Db         64 SGSIDRSSNSASLTISGLQTEDEADYYCQSYDR--DHWVFGGGTKLTVLG 111


RESULT 17
LV7A_HUMAN
ID   LV7A_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01720;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-VII region MOT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
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RP   SEQUENCE.
RX   MEDLINE=81122740; PubMed=6780787;
RA   Kojima M., Odani S., Ikenaka T.;
RT   "Amino acid sequence of the lambda type light chain of a human IgG1
RT   myeloma protein (MOT) with unusual antigenicity: a possible new
RT   subgroup of lambda chain having a unique N-terminal sequence.";
RL   Mol. Immunol. 17:1407-1414(1980).
CC   -!- MISCELLANEOUS: THIS SEQUENCE REPRESENTS A NEW LAMBDA CHAIN
CC       SUBGROUP. IT HAS AN AMINO-TERMINAL EXTENSION OF THREE RESIDUES
CC       COMPARED WITH OTHER HUMAN LAMBDA CHAINS.
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE MCG+ AND KERN+
CC       MARKERS.
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01986; L7HUMT.
DR   HSSP; P80748; 2LOI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    105       IG-LIKE.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11942 MW;  140A28A2F86A6911 CRC64;

  Query Match             54.7%;  Score 319;  DB 1;  Length 111;
  Best Local Similarity   57.9%;  Pred. No. 2.1e-25;
  Matches   62;  Conservative   14;  Mismatches   31;  Indels    0;  Gaps    0;

Qy          5 ELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              |||| |:||:| |||  :||:|: :      |||||||||| |||   :||||:| |||
Db          5 ELTQPPSVSLAAGQTAMITCEGNDIGERSVHWYQQKPGQAPVPVIYDDADRPSGVPARFS 64

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              | :|||:| |||   :| |||||:| | |:     ||| || :||||
Db         65 GYNSGNSAILTINRVEAGDEADYFCQSWDNGSYEVVFGTGTMVTVLG 111


RESULT 18
LV1F_HUMAN
ID   LV1F_HUMAN     STANDARD;      PRT;   109 AA.
AC   P04208;
DT   20-MAR-1987 (Rel. 04, Created)
DT   20-MAR-1987 (Rel. 04, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig lambda chain V-I region WAH.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=83221661; PubMed=6407018;
RA   Takahashi Y., Takahashi N., Tetaert D., Putnam F.W.;
RT   "Complete covalent structure of a human immunoglobulin D: sequence of
RT   the lambda light chain.";
RL   Proc. Natl. Acad. Sci. U.S.A. 80:3686-3690(1983).
DR   PIR; A01967; L1HUWA.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     97       V SEGMENT.
FT   DOMAIN       98    109       J SEGMENT.
FT   DISULFID     22     89       BY SIMILARITY.
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11725 MW;  B17785F6A8DF9BAC CRC64;

  Query Match             54.5%;  Score 318;  DB 1;  Length 109;
  Best Local Similarity   58.7%;  Pred. No. 2.6e-25;
  Matches   64;  Conservative   12;  Mismatches   29;  Indels    4;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |: |   || | ::| | |  :  ||  |||| ||  | |:||  | ||||:||
Db          2 SVLTQPPSASGTPGQRVTISCFGSSSNIGRYYVYWYQQLPGTTPKLLIYKDNQRPSGVPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||| || :||| |:| ::|||||||:: | |   ||||||| ||||
Db         62 RFSGSKSGTSASLAISGLRSEDEADYYCAAWDDS--LWVFGGGTTLTVL 108


RESULT 19
LV1C_HUMAN
ID   LV1C_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01701;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region NEW.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=69060892; PubMed=4177823;
RA   Langer B., Steinmetz-Kayne M., Hilschmann N.;
RT   "The complete amino acid sequence of Bence Jones protein New (lambda-
RT   type). Subgroups in the variable part of immunoglobulin L-chains of
RT   the lambda-type.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 349:945-951(1968).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01964; L1HUNW.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    105       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     89       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11453 MW;  AAECBCA3C49F2AD3 CRC64;

  Query Match             53.7%;  Score 313;  DB 1;  Length 111;
  Best Local Similarity   58.2%;  Pred. No. 8.4e-25;
  Matches   64;  Conservative   14;  Mismatches   30;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |:|| | || | ::| | |  : : | ||:|  || || |:||  | |||||||
Db          2 SVLTQPPSVSAAPGQKVTISCSGGSTNIGNNYVSWHQHLPGTAPKLLIYEDNKRPSGIPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              | | | || :|:| ||| :  |||||||:: ||| |  ||||||::||||
Db         62 RISASKSGTSATLGITGLRTGDEADYYCATWDSSLNAVVFGGGTKVTVLG 111
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RESULT 20
LV2I_HUMAN
ID   LV2I_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01712;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region WIN.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=79062503; PubMed=102365;
RA   Chen B.L., Chiu Y.-Y.H., Humphrey R.L., Poljak R.J.;
RT   "Amino acid sequence of the human myeloma lambda chain Win.";
RL   Biochim. Biophys. Acta 537:9-21(1978).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01978; L2HUWN.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11694 MW;  8C3CE95FE721B87C CRC64;

  Query Match             53.3%;  Score 311;  DB 1;  Length 111;
  Best Local Similarity   57.7%;  Pred. No. 1.3e-24;
  Matches   64;  Conservative   17;  Mismatches   26;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| | || : ||:| ::| |   ::  | : ||||| ||: | |:||  : ||||:|
Db          2 SALTQPPRVSGSPGQSVTISCTGSYSNVTGYNHVSWYQQDPGKVPKLMIYDVDKRPSGVP 61

          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
             |||||| | |||||||:| || :||||||||   : :  :|||||:|||||
Db         62 DRFSGSKSANTASLTISGLQANNEADYYCSSYGGTYS-LIFGGGTKLTVLG 111


RESULT 21
LV2E_HUMAN
ID   LV2E_HUMAN     STANDARD;      PRT;   109 AA.
AC   P01708;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region BUR.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80006606; PubMed=113407;
RA   Infante A.J., Putnam F.W.;
RT   "Primary structure of a human IgA1 immunoglobulin. V. Amino acid
RT   sequence of a human IgA lambda light chain (Bur).";
RL   J. Biol. Chem. 254:9006-9016(1979).
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE KERN+ AND MCG+
CC       MARKERS.
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01974; L2HUBR.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS:
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   SITE         91     91       APPEARS TO BE A FREE BUT UNREACTIVE
FT                                SULFHYDRYL GROUP.
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11506 MW;  BFD8AE1C5D267FAB CRC64;

  Query Match             53.2%;  Score 310;  DB 1;  Length 109;
  Best Local Similarity   59.5%;  Pred. No. 1.6e-24;
  Matches   66;  Conservative   15;  Mismatches   24;  Indels    6;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : | :| ::| | |  :  | | ||||| ||:|| |:||  ::||||:|
Db          2 SALTQPRSVSGSPGHSVTISCIGTSSNVGDYKYVSWYQQHPGKAPKLIIYEVSSRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||| |||||||||:| |||||||||| |   |   :||| ||:: |||
Db         62 DRFSGSKSGNTASLTISGLQAEDEADYYCCSYIGS---YVFGTGTKVIVLG 109


RESULT 22
LV6A_HUMAN
ID   LV6A_HUMAN     STANDARD;      PRT;   112 AA.
AC   P01721;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-VI region AR.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE (AMYLOID PROTEIN AR).
RX   MEDLINE=82091000; PubMed=6797401;
RA   Sletten K., Natvig J.B., Husby G., Juul J.;
RT   "The complete amino acid sequence of a prototype
RT   immunoglobulin-lambda light-chain-type amyloid-fibril protein AR.";
RL   Biochem. J. 195:561-572(1981).
CC   -!- MISCELLANEOUS: ABOUT HALF OF THE LAMBDA CHAIN C REGION IS MISSING
CC       FROM THIS PROTEIN.
CC   -!- MISCELLANEOUS: THIS PROTEIN WAS ISOLATED FROM THE SPLEEN OF A
CC       PATIENT WITH AMYLOIDOSIS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01987; L6HUAR.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Amyloid.
FT   DOMAIN        1    107       IG-LIKE.
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FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11918 MW;  570BCD9A368EF1FE CRC64;

  Query Match            53.1%;  Score 309.5;  DB 1;  Length 112;
  Best Local Similarity   57.3%;  Pred. No. 1.9e-24;
  Matches   63;  Conservative   16;  Mismatches   26;  Indels    5;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTC--QGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||  :|| : |:||  :|   | |:   :  ||||:|| ||  |||  | ||||:||||
Db          4 LTQPHSVSESPGKTVTFSCTGSGGSIADSFVQWYQQRPGSAPTTVIYDDNQRPSGVPDRF 63

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||   | |:|||||:| : |||||||| | :|: :| ||||||::||||
Db         64 SGSIDDSANSASLTISGLKTEDEADYYCQSYNSN-HHVVFGGGTKVTVLG 112


RESULT 23
LV6E_HUMAN
ID   LV6E_HUMAN     STANDARD;      PRT;   131 AA.
AC   P06319;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig lambda chain V-VI region EB4 precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=85215660; PubMed=3923440;
RA   Anderson M.L.M., Brown L., McKenzie E., Kellow J.E., Young B.D.;
RT   "Cloning and sequence analysis of an Ig lambda light chain mRNA
RT   expressed in the Burkitt's lymphoma cell line EB4.";
RL   Nucleic Acids Res. 13:2931-2941(1985).
DR   PIR; A01990; L6HUEB.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    131       IG LAMBDA CHAIN V-VI REGION EB4.
FT   DOMAIN       20     41       FRAMEWORK-1.
FT   DOMAIN       42     54       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       55     69       FRAMEWORK-2.
FT   DOMAIN       70     76       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       77    110       FRAMEWORK-3.
FT   DOMAIN      111    118       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      119    131       FRAMEWORK-4.
FT   DISULFID     41    110       BY SIMILARITY.
FT   NON_TER     131    131
SQ   SEQUENCE   131 AA;  14147 MW;  02A9179C8C05C2CD CRC64;

  Query Match            52.6%;  Score 306.5;  DB 1;  Length 131;
  Best Local Similarity   58.2%;  Pred. No. 4.6e-24;
  Matches   64;  Conservative   16;  Mismatches   25;  Indels    5;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTCQGD--SLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||  :|| : |:|| ::|: |:  |: | |  ||||:   || :|||  | || |:||||
Db         23 LTQPHSVSESPGKTVTISCTGNSGSIASNYVQWYQQRRVSAPTIVIYEDNQRPLGVPDRF 82

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||  || |:||||:| : |||||||| | |:: |  ||||||:|||||
Db         83 SGSIDSSSNSASLTISGLKTEDEADYYCQSFDNT-NQGVFGGGTKLTVLG 131


RESULT 24
LV2A_HUMAN
ID   LV2A_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01704;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region TOG.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80048495; PubMed=500108;
RA   Nabeshima Y., Ikenaka T.;
RT   "Primary structure of cryo Bence-Jones protein (Tog) from the urine
RT   of a patient with IgD myeloma.";
RL   Mol. Immunol. 16:439-444(1979).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01969; L2HUTG.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    100       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11713 MW;  FD20AEF4CE5364E2 CRC64;

  Query Match            52.5%;  Score 306;  DB 1;  Length 111;
  Best Local Similarity   57.3%;  Pred. No. 4.3e-24;
  Matches   63;  Conservative   19;  Mismatches   24;  Indels    4;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:: ::|  |  : : || | ||||| ||:|| ::|:  |:||||:
Db          2 SALTQPASVSASPGQSITISCTGTTNDIGSYSYVSWYQQYPGKAPKVLIFDVNSRPSGVS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||||| |||||||||:| |||||| |:|||  :||   :||||| :|||
Db         62 HRFSGSKSGNTASLTISGLQAEDEAHYFCSSYRTSGT-IIFGGGTYVTVL 110


RESULT 25
LV2J_HUMAN
ID   LV2J_HUMAN     STANDARD;      PRT;   110 AA.
AC   P01713;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region NIG-58.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=81215386; PubMed=6787031;
RA   Takayasu T., Takahashi N., Shinoda T., Okuyama T., Tomioka H.;
RT   "Comparative studies on the structure of the light chains of human
RT   immunoglobulins. III. Amino acid sequence of a lambda type Bence
RT   Jones euglobulin.";
RL   J. Biochem. 89:421-436(1981).
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CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01979; L2HU58.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    100       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID (PROBABLE).
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11455 MW;  76C9F4C6B20312B6 CRC64;

  Query Match             51.7%;  Score 301.5;  DB 1;  Length 110;
  Best Local Similarity   58.4%;  Pred. No. 1.2e-23;
  Matches   66;  Conservative   14;  Mismatches   22;  Indels   11;  Gaps    4;

Qy          4 SELTQDPAVSVALGQTVRVTCQG-----DSLRSYYASWYQQKPGQAPVLVIYGKNNRPSG 58
              | |||  :|| : ||:: ::| |     |   |   ||||| ||:|| |:||| :|||||
Db          2 SALTQPRSVSGSPGQSLTISCSGAPCDVDGCES--VSWYQQHPGKAPKLIIYGFSNRPSG 59

Qy         59 IPDRFSGSSSGNTASLTITGAQAEDEADYYCSS-RDSSGNHWVFGGGTELTVL 110
              :| ||||| ||: |||||:| | |||||||||  |||    :|| ||:|||
Db         60 VPLRFSGSKSGDAASLTISGLQVEDEADYYCSSYADSS---VIFGAGTKLTVL 109


RESULT 26
LV1I_HUMAN
ID   LV1I_HUMAN     STANDARD;      PRT;   109 AA.
AC   P06888;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region EPS.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=86000126; PubMed=3929803;
RA   Toft K.G., Sletten K., Husby G.;
RT   "The amino-acid sequence of the variable region of a carbohydrate-
RT   containing amyloid fibril protein EPS (immunoglobulin light chain,
RT   type lambda).";
RL   Biol. Chem. Hoppe-Seyler 366:617-625(1985).
CC   -!- MISCELLANEOUS: RESIDUES 1-2, 56-62, AND 74-78 AND THE SEQUENCED
CC       PEPTIDES WERE POSITIONED BY HOMOLOGY.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A24656; L1HUEP.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Amyloid; Glycoprotein.
FT   DOMAIN        1    105       IG-LIKE.
FT   CARBOHYD    104    104       N-LINKED (GLCNAC. . .).
FT   DISULFID     22     89       BY SIMILARITY.
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11414 MW;  556A313E24D5AC73 CRC64;

  Query Match             51.5%;  Score 300;  DB 1;  Length 109;
  Best Local Similarity   55.5%;  Pred. No. 1.7e-23;
  Matches   61;  Conservative   14;  Mismatches   31;  Indels    4;  Gaps    2;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |::| | || | ::| | |  :   |  |||| || || |:|:  | |||||||
Db          2 SVLTQPPSLSAAPGQRVSISCSGSSSNIGKNYVDWYQQLPGTAPKLLIFNNNKRPSGIPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :|:| ||| |  ||| ||| : |:  :  |||||| :||:|
Db         62 RFSGSKSGTSATLGITGLQTGDEAIYYCGTWDNRRS--VFGGGTNVTVVG 109


RESULT 27
LV2B_HUMAN
ID   LV2B_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01705;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region NEI.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=72233223; PubMed=5043326;
RA   Garver F.A., Hilschmann N.;
RT   "The primary structure of a monoclonal human lambda-type
RT   immunoglobulin L-chain of subgroup II (Bence-Jones protein NEI).";
RL   Eur. J. Biochem. 26:10-32(1972).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01970; L2HUNI.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein; Glycoprotein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   CARBOHYD     96     96       N-LINKED (GLCNAC. . .).
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11591 MW;  AD6D156584D087EB CRC64;

  Query Match             51.1%;  Score 298;  DB 1;  Length 111;
  Best Local Similarity   57.7%;  Pred. No. 2.7e-23;
  Matches   64;  Conservative   15;  Mismatches   26;  Indels    6;  Gaps    4;

Qy          4 SELTQDPAVSVALGQTVRVTCQG--DSLRSY-YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:: ::| |    : || : ||||| ||:|| |:||  | ||||:
Db          2 SALTQPASVSGSPGQSITISCTGTTSDVGSYNFVSWYQQNPGKAPKLMIYEGNKRPSGVS 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW-VFGGGTELTVL 110
              :||||| || |||||:| | ||||||| |   :||   |||||| :|||
Db         62 NRFSGSKSGKTASLTISGLQVEDEADYYCCS--YAGNSTRVFGGGTRVTVL 110


RESULT 28
LV6D_HUMAN
ID   LV6D_HUMAN     STANDARD;      PRT;   111 AA.
AC   P06318;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
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DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig lambda chain V-VI region WLT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=86122667; PubMed=4089539;
RA   Dwulet F.E., Strako K., Benson M.D.;
RT   "Amino acid sequence of a lambda VI primary (AL) amyloid protein
RT   (WLT).";
RL   Scand. J. Immunol. 22:653-660(1985).
DR   PIR; A01989; L6HULT.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     22       FRAMEWORK-1.
FT   DOMAIN       23     35       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       36     50       FRAMEWORK-2.
FT   DOMAIN       51     57       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       58     91       FRAMEWORK-3.
FT   DOMAIN       92    101       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      102    111       FRAMEWORK-4.
FT   DISULFID     22     91       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11966 MW;  0C88B2FE37BCE24F CRC64;

  Query Match             50.9%;  Score 297;  DB 1;  Length 111;
  Best Local Similarity   59.1%;  Pred. No. 3.4e-23;
  Matches   65;  Conservative   13;  Mismatches   26;  Indels    6;  Gaps    4;

Qy          6 LTQDPAVSVALGQTVRVTCQGD--SLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              |||  :|| :  :|| ::| |    |: | |  ||||:|| ||  |||  | ||| :||||
Db          4 LTQPLSVSGSPEKTVTISCTGSSGSIGSNYVQWYQQRPGSAPTNVIYENNQRPSEVPDRF 63

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||  || |:|||||:| : |||||||| | |:: || || ||| |||||
Db         64 SGSIDSSSNSASLTISGLKTEDEADYYCQSYDNN-NHVVF-GGTRLTVLG 111


RESULT 29
LV2D_HUMAN
ID   LV2D_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01707;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-II region TRO.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80114123; PubMed=118915;
RA   Scholz R., Yang C., Hilschmann N.;
RT   "Rule of antibody structure. Primary structure of a human monoclonal
RT   IgAl-immunoglobulin (myeloma protein Tro). VI. Amino acid sequence of
RT   the L-chain, lambda-type, subgroup II.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 360:1903-1918(1979).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01973; L2HUTR.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11561 MW;  99DC457A12E8F6E1 CRC64;

  Query Match             50.6%;  Score 295;  DB 1;  Length 111;
  Best Local Similarity   57.1%;  Pred. No. 5.4e-23;
  Matches   64;  Conservative   19;  Mismatches   23;  Indels    6;  Gaps    4;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYA-SWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | |||  :|| : ||:| ::| | |  : :| : ||||| ||:|| |:|:    ||||:|
Db          2 SALTQPRSVSGSPGQSVTISCTGTSSDVGAYNSVSWYQQHPGKAPKLMIFDVTKRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWV-FGGGTELTVLG 111
              || ||| ||:|||||:| :|:|||||| |   :| : | |||||:|||||
Db         62 DRLSGSKSGDTASLTISGLRADDEADYYCCS--YAGRYSVIFGGGTKLTVLG 111


RESULT 30
LV6B_HUMAN
ID   LV6B_HUMAN     STANDARD;      PRT;   112 AA.
AC   P01722;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-VI region NIG-48.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=80094390; PubMed=118171;
RA   Takahashi N., Takayasu T., Isobe T., Shinoda T., Okuyama T.,
RA   Shimizu A.;
RT   "Comparative study on the structure of the light chains of human
RT   immunoglobulins. II. Assignment of a new subgroup.";
RL   J. Biochem. 86:1523-1535(1979).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01991; L6HU48.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein.
FT   DOMAIN        1    107       IG-LIKE.
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  12152 MW;  CFBB307BC527A384 CRC64;

  Query Match             50.3%;  Score 293.5;  DB 1;  Length 112;
  Best Local Similarity   56.0%;  Pred. No. 7.8e-23;
  Matches   61;  Conservative   16;  Mismatches   27;  Indels    5;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTC--QGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              | | |:|| : |:|| ::|    ||: | |  ||:|:|| ||  :||  | || |:|:||
```

```
Db          4 LIQPPSVSESPGKTVTMSCTRTSDSIASNYVQWYRQRPGGAPTTLIYDTNQRPYGVPNRF 63

Qy         64 SGS--SSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||  || |:|||||:|   :| | |:| | ||| | |||||||:||||
Db         64 SGSFDSSSNSASLTISGLTNDDTAMYFCQSYDSS-NLWVFGGGTKLTVL 111


RESULT 31
LV1B_HUMAN
ID   LV1B_HUMAN     STANDARD;      PRT;   112 AA.
AC   P01700;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region HA.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=71103824; PubMed=5532227;
RA   Shinoda T., Titani K., Putnam F.W.;
RT   "Amino acid sequence of human lambda chains. II. Chymotryptic
RT   peptides and sequence of protein Ha.";
RL   J. Biol. Chem. 245:4475-4487(1970).
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01963; L1HUHA.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11896 MW;  8D73378F3F5CD039 CRC64;

  Query Match           50.2%;  Score 292.5;  DB 1;  Length 112;
  Best Local Similarity   54.5%;  Pred. No. 9.8e-23;
  Matches   60;  Conservative   16;  Mismatches   31;  Indels    3;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |:||   || | ::| | |     : |  |||| || || |:||  : ||||:|
Db          2 SVLTQPPSVSGTPGQRVTISCSGGSSNGTGNNYVYWYQQLPGTAPKLLIYRDDKRPSGVP 61

Qy         61 DRFSGSSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||||| || :||| |:| ::|||| |:|:: |   :  ||||||:||||
Db         62 DRFSGSKSGTSASLAISGLRSEDEAHYHCAAWDYRLSAVVFGGGTQLTVL 111


RESULT 32
LV1_CHICK
ID   LV1_CHICK      STANDARD;      PRT;   113 AA.
AC   P04210;
DT   20-MAR-1987 (Rel. 04, Created)
DT   20-MAR-1987 (Rel. 04, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig lambda chain V-1 region precursor.
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=85099341; PubMed=3917859;
RA   Reynaud C.A., Anquez V., Dahan A., Weill J.-C.;
RT   "A single rearrangement event generates most of the chicken
RT   immunoglobulin light chain diversity.";
RL   Cell 40:283-291(1985).
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; M12317; AAA50793.1; -.
DR   PIR; A01992; L1CHV.
DR   HSSP; P80748; 2LOI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     21
FT   CHAIN        22    113       IG LAMBDA CHAIN V-1 REGION.
FT   DOMAIN       22     41       FRAMEWORK-1.
FT   DOMAIN       42     49       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       50     65       FRAMEWORK-2.
FT   DOMAIN       66     72       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       73    104       FRAMEWORK-3.
FT   DOMAIN      105    113       COMPLEMENTARITY-DETERMINING-3.
FT   DISULFID     41    104       BY SIMILARITY.
FT   NON_TER     113    113
SQ   SEQUENCE   113 AA;  11695 MW;  167BA8FA9449733B CRC64;

  Query Match           50.1%;  Score 292;  DB 1;  Length 113;
  Best Local Similarity   65.9%;  Pred. No. 1.1e-22;
  Matches   60;  Conservative    8;  Mismatches   19;  Indels    4;  Gaps    3;

Qy          6 LTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQK-PGQAPVLVIYGKNNRPSGIPDRFS 64
              |||  :||   |:||::|| ||  ||||  ||||| || ||| :||   |||| || |||
Db         23 LTQPSSVSANPGETVKITCSGD--RSYY-GWYQQKAPGSAPVTLIYDNTNRPSNIPSRFS 79

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSS 95
              || ||:||:||||| ||:||| ||| | |||
Db         80 GSKSGSTATLTITGVQADDEAVYYCGSADSS 110


RESULT 33
LV1H_HUMAN
ID   LV1H_HUMAN     STANDARD;      PRT;   112 AA.
AC   P06887;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region MEM.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=85257662; PubMed=2410269;
RA   Mihaesco E., Roy J.P., Congy N., Peran-Rivat L., Mihaesco C.;
RT   "The amino acid sequence of a lambda light chain presenting abnormal
RT   physicochemical and antigenic features.";
RL   Eur. J. Biochem. 150:349-357(1985).
CC   -!- MISCELLANEOUS: RESIDUES 33-36 AND SOME OF THE SEQUENCED PEPTIDES
CC       WERE POSITIONED BY HOMOLOGY.
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE MCG+ AND KERN+
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CC       MARKERS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A25479; L1HUMM.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Monoclonal antibody;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    106       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     112    112
SQ   SEQUENCE   112 AA;  11789 MW;  748124F079CFFBE4 CRC64;

  Query Match             50.0%;  Score 291.5;  DB 1;  Length 112;
  Best Local Similarity   54.5%;  Pred. No. 1.2e-22;
  Matches   60;  Conservative   15;  Mismatches   32;  Indels    3;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |: |   |  | ::| | |     :  | |||| || || |:|| | ||||:|
Db          2 SVLTQPPSASGTPGGRVTISCSGSSSNVGSNZPAYWYQQLPGTAPKLLIYNYNQRPSGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              |||| | || :||| |:| |:||||||||:: | | : :||| ||::|||
Db         62 DRFSASRSGTSASLAISGLQSEDEADYYCAAWDDSLDGYVFGTGTKVTVL 111


RESULT 34
LV1A_HUMAN
ID   LV1A_HUMAN     STANDARD;      PRT;   111 AA.
AC   P01699;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region VOR.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=76023790; PubMed=809332;
RA   Engelhard M., Hilschmann N.;
RT   "Pattern of antibody structure. The amino acid sequence of a
RT   monoclonal immunoglobulin L-chain of lambde-type, subgroup I
RT   (Bence-Jones-protein Vor.). A contribution to the elucidation of the
RT   origin of antibody specificity.";
RL   Hoppe-Seyler's Z. Physiol. Chem. 356:1413-1444(1975).
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE OZ+ MARKER.
CC   -!- MISCELLANEOUS: THIS IS A BENCE-JONES PROTEIN.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01962; L1HUVO.
DR   HSSP; P01703; 7FAB.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Bence-Jones protein;
KW   Pyrrolidone carboxylic acid.
FT   DOMAIN        1    105       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   DISULFID     22     89       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11514 MW;  21D9F64250DFC8E0 CRC64;

  Query Match             48.5%;  Score 283;  DB 1;  Length 111;
  Best Local Similarity   51.8%;  Pred. No. 8.8e-22;
  Matches   57;  Conservative   19;  Mismatches   32;  Indels    2;  Gaps    1;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDS--LRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPD 61
              | ||| |: |   || | ::| | :  :      :|||  || || |:||  : | ||:||
Db          2 SVLTQPPSASGTPGQRVTISCSGGNFDIGRNSVNWYQVHPGTAPRLLIYSSDQRSSGVPD 61

Qy         62 RFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||| || :||| |:| |:|:||||:|:: | | :  ||||||::||||
Db         62 RFSGSKSGTSASLAISGLQSENEADYFCATWDDSLDGPVFGGGTKVTVLG 111


RESULT 35
LV1B_MOUSE
ID   LV1B_MOUSE     STANDARD;      PRT;   129 AA.
AC   P01724;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda-1 chain V regions MOPC 104E/RPC20/J558/S104 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE OF 1-29 (MOPC 104E), AND REVISIONS TO 20 AND 26.
RX   MEDLINE=77148916; PubMed=403522;
RA   Burstein Y., Schechter I.;
RT   "Amino acid sequence of the NH2-terminal extra piece segments of the
RT   precursors of mouse immunoglobulin lambda1-type and kappa-type light
RT   chains.";
RL   Proc. Natl. Acad. Sci. U.S.A. 74:716-720(1977).
RN   [2]
RP   SEQUENCE OF 20-129 (MOPC 104E AND RPC 20).
RX   MEDLINE=71107854; PubMed=5276767;
RA   Appella E.;
RT   "Amino acid sequences of two mouse immunoglobulin lambda chains.";
RL   Proc. Natl. Acad. Sci. U.S.A. 68:590-594(1971).
RN   [3]
RP   REVISIONS (MOPC 104E).
RX   MEDLINE=73229669; PubMed=4516208;
RA   Appella E.;
RL   Unpublished results, cited by:
RL   Cesari I.M., Weigert M.;
RL   Proc. Natl. Acad. Sci. U.S.A. 70:2112-2116(1973).
RN   [4]
RP   SEQUENCE OF 20-129 (J558 AND S104).
RX   MEDLINE=73229669; PubMed=4516208;
RA   Cesari I.M., Weigert M.;
RT   "Mouse lambda-chain sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 70:2112-2116(1973).
CC   -!- MISCELLANEOUS: COMPOSITIONS AND PARTIAL SEQUENCES OF RPC 20 SHOW
CC       NO DIFFERENCES FROM MOPC 104E. THE SEQUENCES OF J558 AND S104
CC       SEEMS IDENTICAL WITH THAT SHOWN.
CC   -!- MISCELLANEOUS: THESE PROTEINS WERE ISOLATED FROM SERUM OR URINE OF
CC       TUMOR-BEARING MICE.
CC   -!- MISCELLANEOUS: THE MOPC 104E PRECURSOR WAS SYNTHESIZED IN A
CC       CELL-FREE SYSTEM DIRECTED BY MRNA ISOLATED FROM MOPC 104E
CC       MYELOMA POLYSOMES. MET-1 WAS LACKING IN 90% OF THE CHAINS. IT IS
CC       PROBABLY RAPIDLY CLEAVED AFTER SYNTHESIS.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; B93815; L1MS4E.
DR   PDB; 1A6U; 27-MAY-98.
DR   PDB; 1A6W; 15-JUL-98.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
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DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; Pyrrolidone carboxylic acid;
KW   3D-structure.
FT   SIGNAL        1     19
FT   CHAIN        20    129       IG LAMBDA-1 CHAIN V REGIONS MOPC
FT                                 104E/RPC20/J558/S104.
FT   DOMAIN       20    125       IG-LIKE.
FT   MOD_RES      20     20       PYRROLIDONE CARBOXYLIC ACID.
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  13479 MW;  03629939D5791AC0 CRC64;

  Query Match             48.5%;  Score 282.5;  DB 1;  Length 129;
  Best Local Similarity   55.0%;  Pred. No. 1.2e-21;
  Matches   60;  Conservative   15;  Mismatches   29;  Indels    5;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |     | ||:| ||||       :| | |||  |:| |
Db         23 VTQESALTTSPGETVTLTCRSSTGAVTTSNYANWVQQKPDHLFTGLIGGTNNRAPGVPAR 82

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  || |:||||||| |||| |:|:   |  |||||||||:|||||
Db         83 FSGSLIGNKAALTITGAQTEDEAIYFCALWYS--NHWVFGGGTKLTVLG 129


RESULT 36
KV13_RABIT
ID   KV13_RABIT     STANDARD;      PRT;   110 AA.
AC   P01694;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V region 3547.
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=76161170; PubMed=816371;
RA   Thunberg A.L., Kindt T.J.;
RT   "Amino acid sequence of rabbit light chains: variable region of a
RT   light chain from a homogeneous immunoglobulin raised by streptococcal
RT   immunization.";
RL   Biochemistry 15:1381-1386(1976).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS OBTAINED FROM AN IMMUNOGLOBULIN THAT
CC       HAD NO DETECTABLE ANTIGEN-BINDING ACTIVITY AND THAT WAS PRODUCED
CC       BY IMMUNIZATION OF A SINGLE RABBIT WITH GROUP A STREPTOCOCCAL
CC       VACCINE.
DR   PIR; A01957; KVRB54.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     23       FRAMEWORK-1.
FT   DOMAIN       24     34       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       35     49       FRAMEWORK-2.
FT   DOMAIN       50     56       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       57     88       FRAMEWORK-3.
FT   DOMAIN       89     99       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      100    109       FRAMEWORK-4.
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11201 MW;  B626B897311A352F CRC64;

  Query Match             47.1%;  Score 274.5;  DB 1;  Length 110;
  Best Local Similarity   50.9%;  Pred. No. 6.2e-21;
  Matches   55;  Conservative   14;  Mismatches   38;  Indels    1;  Gaps    1;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | :|| |:| || : ||     |   :|||||||| | |:||  ::  ||:| ||
Db          3 DMTQTPSSVSAAVGGTVTINCQASEDISANLAWYQQKPGQPPKLLIYAASDLASGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              || ||   :|||:| |  | | ||| | | ||:   ||||||: | |
Db         63 KGSGSGTEYTLTISGVQCADAATYYCQSADYSGSAVTFGGGTEVVVKG 110


RESULT 37
LV1D_MOUSE
ID   LV1D_MOUSE     STANDARD;      PRT;   129 AA.
AC   P01726;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda-1 chain V region H2020 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=79084170; PubMed=103630;
RA   Bernard O., Hozumi N., Tonegawa S.;
RT   "Sequences of mouse immunoglobulin light chain genes before and after
RT   somatic changes.";
RL   Cell 15:1133-1144(1978).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P80748; 2LOI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    129       IG LAMBDA-1 CHAIN V REGION H2020.
FT   DOMAIN       20    125       IG-LIKE.
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  13465 MW;  A57C8910157C1316 CRC64;

  Query Match             46.4%;  Score 270.5;  DB 1;  Length 129;
  Best Local Similarity   52.3%;  Pred. No. 1.9e-20;
  Matches   57;  Conservative   17;  Mismatches   30;  Indels    5;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |       ||:| |:||       :| | |||  |:| |
Db         23 VTQESALTTSPGETVTLTCRSTTGAVTTGNYANWVQEKPDHLFTGLIGGTNNRAPGVPAR 82

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  |: |:||||||| |||| |:|:   |  |||||||||:|||||
Db         83 FSGSLIGDKAALTITGAQTEDEAIYFCALWYS--NHWVFGGGTKLTVLG 129


RESULT 38
LV1E_MOUSE
ID   LV1E_MOUSE     STANDARD;      PRT;   129 AA.
AC   P01727;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda-1 chain V region S43 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=82220143; PubMed=6283385;
RA   Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
RA   Baltimore D.;
RT   "Somatic variants of murine immunoglobulin lambda light chains.";
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RL   Nature 298:380-382(1982).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P80748; 2LOI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     19
FT   CHAIN        20    129       IG LAMBDA-1 CHAIN V REGION S43.
FT   DOMAIN       20    125       IG-LIKE.
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  13529 MW;  84E54E7DD5791345 CRC64;

  Query Match             46.4%;  Score 270.5;  DB 1;  Length 129;
  Best Local Similarity   52.3%;  Pred. No. 1.9e-20;
  Matches   57;  Conservative   17;  Mismatches   30;  Indels    5;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |    | ||:| |:||     :| | |||  |:| |
Db         23 VTQESALTTSPGETVTLTCRSSTGAVTTSNYANWVQEKPDHLFTGLIGGTNNRAPGVPAR 82

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  |: |:||||| | |||| |:|:   |  |||||||||:|||||
Db         83 FSGSLIGDKAALTITGTQTEDEAMYFCALWYS--NHWVFGGGTKLTVLG 129


RESULT 39
LV1C_MOUSE
ID   LV1C_MOUSE     STANDARD;      PRT;   110 AA.
AC   P01725;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda-1 chain V region S178.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=73229669; PubMed=4516208;
RA   Cesari I.M., Weigert M.;
RT   "Mouse lambda-chain sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 70:2112-2116(1973).
CC   -!- MISCELLANEOUS: THIS PROTEIN WAS ISOLATED FROM SERUM OR URINE OF
CC       TUMOR-BEARING MICE.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P80748; 2LOI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    106       IG-LIKE.
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11654 MW;  7D06718E1A530206 CRC64;

  Query Match             46.1%;  Score 268.5;  DB 1;  Length 110;
  Best Local Similarity   53.2%;  Pred. No. 2.5e-20;
  Matches   58;  Conservative   15;  Mismatches   31;  Indels    5;  Gaps    2;

Qy          6 LTQDPAVSVALGQTVRVTCQ---GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDR 62
              :||: |:: : |:|| :||:   |    | ||:| |||      :|   |||  |:| |
Db          4 VTQESALTTSPGETVTLTCRSNTGAVTTSNYANWVQQKPDHLFTGLIGNTNNRAPGVPAR 63

Qy         63 FSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||  || |:||||||| |||| |:|:   |  | |||||||:|||||
Db         64 FSGSLIGNKAALTITGAQTEDEAIYFCALWYS--NRWVFGGGTKLTVLG 110


RESULT 40
LV2L_HUMAN
ID   LV2L_HUMAN     STANDARD;      PRT;   111 AA.
AC   P80422;
DT   01-NOV-1995 (Rel. 32, Created)
DT   01-NOV-1995 (Rel. 32, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig gamma lambda chain V-II region DOT.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=95255298; PubMed=7737190;
RA   Stoppini M., Bellotti V., Negri A., Merlini G., Garver F., Ferri G.;
RT   "Characterization of the two unique human anti-flavin monoclonal
RT   immunoglobulins.";
RL   Eur. J. Biochem. 228:886-893(1995).
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   HSSP; P01709; 2MCG.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1    106       IG-LIKE.
FT   DISULFID     22     90       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  11787 MW;  F358B1EA2CD7109A CRC64;

  Query Match             45.1%;  Score 263;  DB 1;  Length 111;
  Best Local Similarity   51.3%;  Pred. No. 9e-20;
  Matches   59;  Conservative   19;  Mismatches   27;  Indels   10;  Gaps    4;

Qy          3 SSELTQDPAVSVALGQTVRVTCQGDSLRSY-----YASWYQQKPGQAPVLVIYGKNNRPS 57
              :| |||  ::| : || | ::| |  | |      : ||||| ||:|| |:||  : |||
Db          1 ASALTQPRSLSGSPGQAVTISCTG--LPSVVDDDNFVSWYQQTPGRAPRLLIYDDSLRPS 58

Qy         58 GIPDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNH-WVFGGGTELTVLG 111
              |:|:||||| |   |:|||:| | :||| |:| |    ||: :||| ||:|||||
Db         59 GVPNRFSGSKSDTKAALTISGLQPDDEATYFCCS--YVGNYIFVFGQGTDLTVLG 111


RESULT 41
KV10_RABIT
ID   KV10_RABIT     STANDARD;      PRT;   117 AA.
AC   P01691;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V region 12F2 precursor (Fragment).
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83273646; PubMed=6410392;
RA   Dreher K.L., Emorine L., Kindt T.J., Max E.E.;
RT   "cDNA clone encoding a complete rabbit immunoglobulin kappa light
RT   chain of b4 allotype.";
RL   Proc. Natl. Acad. Sci. U.S.A. 80:4489-4493(1983).
CC   -!- MISCELLANEOUS: THIS CLONE WAS DERIVED FROM THE RABBIT-MOUSE
CC       HYBRIDOMA 12F2; THE CHAIN PRODUCED IS A MONOCLONAL ANTIBODY
CC       AGAINST STREPTOCOCCAL GROUP C VACCINE.
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CC   ---------------------------------------------------------------------
DR   EMBL; K01358; AAB59259.1; ALT_TERM.
DR   PIR; A01954; K4RBF2.
DR   HSSP; P01607; 1REI.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Monoclonal antibody; Hybridoma; Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1      6
FT   CHAIN         7    117       IG KAPPA CHAIN V REGION 12F2.
FT   DOMAIN        7     29       FRAMEWORK-1.
FT   DOMAIN       30     40       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       41     55       FRAMEWORK-2.
FT   DOMAIN       56     62       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       63     94       FRAMEWORK-3.
FT   DOMAIN       95    106       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      107    116       FRAMEWORK-4.
FT   DISULFID     29     86       BY SIMILARITY.
FT   NON_TER     117    117
SQ   SEQUENCE   117 AA;  12288 MW;  E24A7582389E4439 CRC64;

  Query Match             44.8%;  Score 261;  DB 1;  Length 117;
  Best Local Similarity   51.4%;  Pred. No. 1.5e-19;
  Matches   56;  Conservative   11;  Mismatches   40;  Indels    2;  Gaps    2;

Qy          5 ELTQDPA-VSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| || | ||:| || : ||     | | |||||||||| | |:||  :   ||:  ||
Db          9 DMTQTPASVEVAVGGTVTIKCQASQSISTYLSWYQQKPGQRPKLLIYRASTLASGVSSRF 68

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGN-HWVFGGGTELTVLG 111
                || ||   :|||:| :  | | |||    || |   |||||||: | |
Db         69 KGSGSGTEFTLTISGVECADAATYYCQQGWSSSNVENVFGGGTEVVVKG 117


RESULT 42
LV1E_HUMAN
ID   LV1E_HUMAN     STANDARD;      PRT;   103 AA.
AC   P01703;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig lambda chain V-I region NEWM.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=74109253; PubMed=4814727;
RA   Chen B.L., Poljak R.J.;
RT   "Amino acid sequence of the (lambda) light chain of a human myeloma
RT   immunoglobulin (IgG New).";
RL   Biochemistry 13:1295-1302(1974).
RN   [2]
RP   X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
RX   MEDLINE=78066916; PubMed=618887;
RA   Saul F.A., Amzel L.M., Poljak R.J.;
RT   "Preliminary refinement and structural analysis of the Fab fragment
RT   from human immunoglobulin new at 2.0-A resolution.";
RL   J. Biol. Chem. 253:585-597(1978).
CC   -!- MISCELLANEOUS: THE STRUCTURE OF THE FAB FRAGMENT OF THE IGG1
CC       MYELOMA PROTEIN NEWM WAS DETERMINED.
CC   -!- MISCELLANEOUS: THE ABSENCE OF SEVEN RESIDUES FOUND IN OTHER LAMBDA
CC       CHAINS WAS CONFIRMED BY X-RAY CRYSTALLOGRAPHIC ANALYSIS.
CC   -!- MISCELLANEOUS: THE C REGION OF THIS CHAIN HAS THE OZ+ MARKER.
CC   -!- SIMILARITY: Contains 1 immunoglobulin-like domain.
DR   PIR; A01968; L1HUNM.
DR   PDB; 7FAB; 31-JAN-94.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; 3D-structure; Pyrrolidone carboxylic acid.
FT   DOMAIN        1     99       IG-LIKE.
FT   MOD_RES       1      1       PYRROLIDONE CARBOXYLIC ACID.
FT   STRAND        4      5
FT   STRAND        9     12
FT   TURN         14     15
FT   STRAND       18     23
FT   TURN         26     28
FT   HELIX        29     31
FT   TURN         32     32
FT   STRAND       36     40
FT   TURN         42     43
FT   STRAND       47     48
FT   TURN         52     53
FT   STRAND       57     62
FT   TURN         63     64
FT   STRAND       65     70
FT   HELIX        75     77
FT   STRAND       79     87
FT   TURN         88     89
FT   STRAND       90     94
FT   STRAND       97    101
FT   NON_TER     103    103
SQ   SEQUENCE   103 AA;  10904 MW;  32727AD731AE7584 CRC64;

  Query Match             43.6%;  Score 254;  DB 1;  Length 103;
  Best Local Similarity   53.6%;  Pred. No. 6.7e-19;
  Matches   59;  Conservative   10;  Mismatches   29;  Indels   12;  Gaps    3;

Qy          4 SELTQDPAVSVALGQTVRVTCQGDSLR---SYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              | ||| |:|| | || | ::| | |        :  |||| || || |:|:  |
Db          2 SVLTQPPSVSGAPGQRVTISCTGSSSNIGAGNHVKWYQQLPGTAPKLLIFHNN------- 54

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVL 110
              ||| | ||::|:| ||| |||||||||| | | |    ||||||:||||
Db         55 ARFSVSKSGSSATLAITGLQAEDEADYYCQSYDRSLR--VFGGGTKLTVL 102


RESULT 43
KV5B_MOUSE
ID   KV5B_MOUSE     STANDARD;      PRT;   136 AA.
AC   P01634;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-SEP-2003 (Rel. 42, Last annotation update)
DE   Ig kappa chain V-V region MOPC 21 precursor.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=82059477; PubMed=6170937;
RA   Hamlyn P.H., Gait M.J., Milstein C.;
RT   "Complete sequence of an immunoglobulin mRNA using specific priming
RT   and the dideoxynucleotide method of RNA sequencing.";
RL   Nucleic Acids Res. 9:4485-4494(1981).
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```
RN   [2]
RP   SEQUENCE OF 30-136.
RX   MEDLINE=73053310; PubMed=4638343;
RA   Svasti J., Milstein C.;
RT   "The complete amino acid sequence of a mouse kappa light chain.";
RL   Biochem. J. 128:427-444(1972).
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CC   ---------------------------------------------------------------------
DR   EMBL; V00810; CAA24192.1; ALT_TERM.
DR   PIR; A93736; KVMS21.
DR   PDB; 1IGC; 03-JUN-95.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal; 3D-structure.
FT   SIGNAL       1     29
FT   CHAIN       30    136       IG KAPPA CHAIN V-V REGION MOPC 21.
FT   DOMAIN      30     52       FRAMEWORK-1.
FT   DOMAIN      53     63       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      64     78       FRAMEWORK-2.
FT   DOMAIN      79     85       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      86    117       FRAMEWORK-3.
FT   DOMAIN     118    126       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN     127    136       FRAMEWORK-4.
FT   NON_TER    136    136
SQ   SEQUENCE   136 AA;  14902 MW;  8CDD85113996D1C2 CRC64;

  Query Match             43.1%;  Score 251.5;  DB 1;  Length 136;
  Best Local Similarity   47.6%;  Pred. No. 1.6e-18;
  Matches   50;  Conservative   21;  Mismatches   31;  Indels    3;  Gaps    2;

Qy          6 LTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRFS 64
              :|| | ::|:::|: | :||:       | ||||||| |:| |:||| :|| :|:||||:
Db         33 MTQSPKSMSMSVGERVTLTCKASENVVTYVSWYQQKPEQSPKLLIYGASNRYTGVPDRFT 92

Qy         65 GSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              || |    :|||:  |||| |||:|    |    : |||||:| :
Db         93 GSGSATDFTLTISSVQAEDLADYHCGQGYS--YPYTFGGGTKLEI 135


RESULT 44
KV1M_HUMAN
ID   KV1M_HUMAN     STANDARD;      PRT;   108 AA.
AC   P01605;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V-I region Lay.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=77038198; PubMed=824717;
RA   Capra J.D., Klapper D.G.;
RT   "Complete amino acid sequence of the variable domains of two human
RT   IgM anti-gamma globulins (Lay/Pom) with shared idiotypic
RT   specificities.";
RL   Scand. J. Immunol. 5:677-684(1976).
CC   -!- MISCELLANEOUS: THE SECOND AND THIRD HYPERVARIABLE REGIONS OF THIS
CC       CHAIN ARE IDENTICAL WITH THOSE OF THE HUMAN POM V-III KAPPA CHAIN,
CC       WITH WHICH IT SHARES CERTAIN IDIOTYPIC DETERMINANTS.
CC   -!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGM WITH ANTI-GAMMA
CC       GLOBULIN ACTIVITY.
DR   PIR; A01871; K1HULY.
DR   HSSP; P01607; 1REI.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN       1     23       FRAMEWORK-1.
FT   DOMAIN      24     34       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      35     49       FRAMEWORK-2.
FT   DOMAIN      50     56       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      57     88       FRAMEWORK-3.
FT   DOMAIN      89     97       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      98    107       FRAMEWORK-4.
FT   DISULFID    23     88       BY SIMILARITY.
FT   NON_TER    108    108
SQ   SEQUENCE   108 AA;  11834 MW;  739993A95431434A CRC64;

  Query Match             42.5%;  Score 247.5;  DB 1;  Length 108;
  Best Local Similarity   46.3%;  Pred. No. 3.2e-18;
  Matches   50;  Conservative   18;  Mismatches   33;  Indels    7;  Gaps    3;

Qy          5 ELTQDP-AVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ::|| | ::||::|  | :|||     : | :|||||| || |:||| : | :|:| ||
Db          3 QMTQSPSSLSVSVGDRVTITCQASQNVNAYLNWYQQKPGLAPKLLIYGASTREAGVPSRF 62

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHW--VFGGGTELTV 109
              ||| ||   : ||:  | || | |||       |:|   || ||:: |
Db         63 SGSGSGTDFTFTISSLQPEDIATYYCQQY----NNWPPTFGQGTKVEV 106


RESULT 45
KV01_RABIT
ID   KV01_RABIT     STANDARD;      PRT;   110 AA.
AC   P01682;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V region 2717.
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=74022203; PubMed=4748811;
RA   Appella E., Roholt O.A., Chersi A., Radzimski G., Pressman D.;
RT   "Amino acid sequence of the light chain derived from a rabbit anti-p-
RT   azobenzoate antibody of restricted heterogeneity.";
RL   Biochem. Biophys. Res. Commun. 53:1122-1129(1973).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS OBTAINED FROM ANTIBODY TO
CC       P-AZOBENZOATE AND WAS ISOLATED FROM THE SERUM OF A SINGLE RABBIT.
DR   PIR; A01945; K4RB27.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN       1     23       FRAMEWORK-1.
FT   DOMAIN      24     36       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN      37     51       FRAMEWORK-2.
FT   DOMAIN      52     58       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN      59     90       FRAMEWORK-3.
```

```
FT   DOMAIN       91     99       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      100    109       FRAMEWORK-4.
FT   SITE         98     98       AT THE HAPTEN COMBINING SITE.
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11367 MW;  8A590BBD5282D107 CRC64;

  Query Match             41.9%;  Score 244.5;  DB 1;  Length 110;
  Best Local Similarity   45.9%;  Pred. No. 6.5e-18;
  Matches   51;  Conservative   20;  Mismatches   31;  Indels    9;  Gaps    4;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSY----YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||| |: || |:| || ::||  | :|     | :|||:|||| |  :||  ::  ||:|
Db          4 LTQTPSPVSAAVGGTVTISCQ--STKSIYBBBYLAWYQZKPGQPPKALIYTASSLASGVP 61

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||:|| ||   :||::  : :| | |||   | :|  : ||||||: | |
Db         62 SRFTGSGSGTZFTLTLSDVZCDDAATYYCGGADYTG--YSFGGGTEVVVKG 110


RESULT 46
KV3M_HUMAN
ID   KV3M_HUMAN     STANDARD;      PRT;   129 AA.
AC   P18136;
DT   01-NOV-1990 (Rel. 16, Created)
DT   01-NOV-1990 (Rel. 16, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V-III region HIC precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=88171307; PubMed=3127527;
RA   Kipps T.J., Tomhave E., Chen P.P., Carson D.A.;
RT   "Autoantibody-associated kappa light chain variable region gene
RT   expressed in chronic lymphocytic leukemia with little or no somatic
RT   mutation. Implications for etiology and immunotherapy.";
RL   J. Exp. Med. 167:840-852(1988).
CC   -!- DISEASE: THE PROTEIN IS ONE OF THE SURFACE IMMUNOGLOBULIN M
CC       AUTOANTIBODIES EXPRESSED IN PATIENTS WITH CHRONIC LYMPHOCYTIC
CC       LEUKEMIA.
DR   PIR; PL0021; K3HUHI.
DR   HSSP; P80362; 1WTL.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     20
FT   CHAIN        21    129       IG KAPPA CHAIN V-III REGION HIC.
FT   DOMAIN       21     43       FRAMEWORK-1.
FT   DOMAIN       44     55       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       56     70       FRAMEWORK-2.
FT   DOMAIN       71     77       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       78    109       FRAMEWORK-3.
FT   DOMAIN      110    118       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      119    129       JK1 SEGMENT.
FT   DISULFID     43    109       BY SIMILARITY.
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  14070 MW;  7395528EA2BB74D6 CRC64;

  Query Match             41.9%;  Score 244;  DB 1;  Length 129;
  Best Local Similarity   48.1%;  Pred. No. 8.8e-18;
  Matches   51;  Conservative   19;  Mismatches   32;  Indels    4;  Gaps    3;

Qy          6 LTQDP-AVSVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              ||| |  :|:: |:   ::|:   |: | | :|||||||||| |:||| ::| :||||||
Db         24 LTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRF 83

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||| ||   :|||:  :  | | |||    ||   | || ||:: :
Db         84 SGSGSGTDFTLTISRLEPXDFAVYYCQQYGSS--PWTFGQGTKVEI 127


RESULT 47
KV3O_MOUSE
ID   KV3O_MOUSE     STANDARD;      PRT;   111 AA.
AC   P01667;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V-III region PC 6308.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=79073152; PubMed=103003;
RA   Weigert M., Gatmaitan L., Loh E., Schilling J., Hood L.E.;
RT   "Rearrangement of genetic information may produce immunoglobulin
RT   diversity.";
RL   Nature 276:785-790(1978).
DR   PIR; C01937; KVMS08.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     23       FRAMEWORK-1.
FT   DOMAIN       24     38       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       39     53       FRAMEWORK-2.
FT   DOMAIN       54     60       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       61     92       FRAMEWORK-3.
FT   DOMAIN       93    101       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      102    111       FRAMEWORK-4.
FT   DISULFID     23     92       BY SIMILARITY.
FT   NON_TER     111    111
SQ   SEQUENCE   111 AA;  12071 MW;  7A4ADE4D6C256D29 CRC64;

  Query Match             41.8%;  Score 243.5;  DB 1;  Length 111;
  Best Local Similarity   46.8%;  Pred. No. 8.3e-18;
  Matches   51;  Conservative   16;  Mismatches   35;  Indels    7;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSY----YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||| || ::|:|||   ::|:      |    | :||||||| | |:||  :|  ||||
Db          4 LTQSPASLAVSLGQRATISCKASQSVDYDGDSYMNWYQQKPGQPPKLLIYTASNLESGIP 63

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              ||||| ||   :| |   : || | |||  : |: : | || ||:| :
Db         64 ARFSGSGSGTDFTLNIHPVEEEDAATYYC--QQSNEDPWTFGSGTKLEI 110


RESULT 48
KV3P_MOUSE
ID   KV3P_MOUSE     STANDARD;      PRT;   110 AA.
AC   P01668;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V-III region PC 7210.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE.
```

```
RX   MEDLINE=79073152; PubMed=103003;
RA   Weigert M., Gatmaitan L., Loh E., Schilling J., Hood L.E.;
RT   "Rearrangement of genetic information may produce immunoglobulin
RT   diversity.";
RL   Nature 276:785-790(1978).
DR   PIR; D01937; KVMS10.
DR   HSSP; P01679; 2FBJ.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     23       FRAMEWORK-1.
FT   DOMAIN       24     38       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       39     53       FRAMEWORK-2.
FT   DOMAIN       54     60       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       61     92       FRAMEWORK-3.
FT   DOMAIN       93    100       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      101    110       FRAMEWORK-4.
FT   DISULFID     23     92       BY SIMILARITY.
FT   NON_TER     110    110
SQ   SEQUENCE   110 AA;  11950 MW;  69F1A5CE886B1249 CRC64;

  Query Match             41.7%;  Score 243;  DB 1;  Length 110;
  Best Local Similarity   46.8%;  Pred. No. 9.2e-18;
  Matches   51;  Conservative   14;  Mismatches   36;  Indels    8;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQGDSLRSY----YASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||| || ::|:|||   ::|:       |    | :||||||||  |.|:||  :|  ||||
Db          4 LTQSPASLAVSLGQRATISCKASQSLDYDGDSYMNWYQQKPGQPPKLLIYAASNLESGIP 63

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
                |||||  ||   :| |   : || | |||     | : | || ||:| :
Db         64 ARFSGSGSGTDFTLNIHPVEEEDAATYYC---HQSEDPWTFGSGTKLEI 109


RESULT 49
KV4B_HUMAN
ID   KV4B_HUMAN     STANDARD;      PRT;   133 AA.
AC   P06313;
DT   01-JAN-1988 (Rel. 06, Created)
DT   01-JAN-1988 (Rel. 06, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V-IV region JI precursor.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=86041853; PubMed=2997712;
RA   Klobeck H.G., Bornkamm G.W., Combriato G., Mocikat R., Pohlenz H.D.,
RA   Zachau H.G.;
RT   "Subgroup IV of human immunoglobulin K light chains is encoded by a
RT   single germline gene.";
RL   Nucleic Acids Res. 13:6515-6529(1985).
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; Z00022; CAA77317.1; -.
DR   PIR; A01904; K4HUJI.
DR   HSSP; P80362; 1WTL.
DR   GO; GO:0005576; C:extracellular; NAS.
DR   GO; GO:0003823; F:antigen binding activity; NAS.
DR   GO; GO:0006955; P:immune response; NAS.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region; Signal.
FT   SIGNAL        1     20
FT   CHAIN        21    133       IG KAPPA CHAIN V-IV REGION JI.
FT   DOMAIN       21     43       FRAMEWORK-1.
FT   DOMAIN       44     60       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       61     75       FRAMEWORK-2.
FT   DOMAIN       76     82       COMPLEMENTARITY-DETERMINING-2.
FT   DOMAIN       83    114       FRAMEWORK-3.
FT   DOMAIN      115    122       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      123    132       FRAMEWORK-4.
FT   DISULFID     43    114       BY SIMILARITY.
FT   NON_TER     133    133
SQ   SEQUENCE   133 AA;  14632 MW;  5FB3953066744AF4 CRC64;

  Query Match             41.7%;  Score 243;  DB 1;  Length 133;
  Best Local Similarity   45.0%;  Pred. No. 1.1e-17;
  Matches   50;  Conservative   18;  Mismatches   33;  Indels   10;  Gaps    3;

Qy          6 LTQDP-AVSVALGQTVRVTCQGDSLRSY------YASWYQQKPGQAPVLVIYGKNNRPSG 58
              :|| | :::|:||:   : |:       |       | :||||||| | |:||  : | ||
Db         24 MTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESG 83

Qy         59 IPDRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              :||||||| ||   :|||:  |||| | |||    |:       |||||:: :
Db         84 VPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQQYDTIP---TFGGGTKVEI 131


RESULT 50
KV14_RABIT
ID   KV14_RABIT     STANDARD;      PRT;   109 AA.
AC   P01695;
DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Ig kappa chain V region K16-167.
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=77162585; PubMed=404188;
RA   Riesen W.F., Braun D.G.;
RT   "The amino acid sequence of the eight-chain variable region of a
RT   rabbit antibody against the streptococcal group A variant
RT   polysaccharide (antibody K16-167).";
RL   FEBS Lett. 75:254-258(1977).
RN   [2]
RP   REVISIONS TO 22 AND 105.
RA   Riesen W.F., Braun D.G.;
RL   FEBS Lett. 81:219-219(1977).
CC   -!- MISCELLANEOUS: THIS CHAIN WAS OBTAINED FROM ANTIBODY TO THE
CC       POLYSACCHARIDE OF A STREPTOCOCCAL GROUP A VARIANT AND WAS ISOLATED
CC       FROM THE SERUM OF A SINGLE RABBIT.
DR   PIR; A91436; KVRB16.
DR   HSSP; P80362; 1WTL.
DR   InterPro; IPR007110; Ig-like.
DR   InterPro; IPR003006; Ig_MHC.
DR   InterPro; IPR003596; Ig_v.
DR   Pfam; PF00047; ig; 1.
DR   SMART; SM00406; IGv; 1.
DR   PROSITE; PS50835; IG_LIKE; 1.
KW   Immunoglobulin V region.
FT   DOMAIN        1     23       FRAMEWORK-1.
FT   DOMAIN       24     35       COMPLEMENTARITY-DETERMINING-1.
FT   DOMAIN       36     50       FRAMEWORK-2.
FT   DOMAIN       51     57       COMPLEMENTARITY-DETERMINING-2.
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FT   DOMAIN       58     89       FRAMEWORK-3.
FT   DOMAIN       90     99       COMPLEMENTARITY-DETERMINING-3.
FT   DOMAIN      100    109       FRAMEWORK-4.
FT   NON_TER     109    109
SQ   SEQUENCE   109 AA;  11268 MW;  C5A2CA80587448E2 CRC64;

  Query Match             41.6%;  Score 242.5;  DB 1;  Length 109;
  Best Local Similarity   48.1%;  Pred. No. 1e-17;
  Matches   51;  Conservative   18;  Mismatches   34;  Indels    3;  Gaps    3;

Qy          6 LTQDPA-VSVALGQTVRVTCQ-GDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIPDRF 63
              :|| |: || |:| || ::|| |: |  ||:|||||| | |:||  :  ||:| ||
Db          4 MTQTPSPVSAAVGGTVTISCQASQSVYSNNLSWFQQKPGQPPKLLIYKASTLASGVPSRF 63

Qy         64 SGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTV 109
              || ||   :| |:| : :| | |||    ::||: ||| |||: |
Db         64 KGSGSGTQFTLPISGVECDDAATYYCQG-TNTGNNIVFGTGTEVVV 108


Search completed: November 26, 2003, 13:39:48
Job time : 10.4872 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:41:10 ; Search time 23.7179 Seconds
(without alignments)
863.195 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 673684 seqs, 184443283 residues

number of hits satisfying chosen parameters: 673684

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	583	100.0	249	11	US-09-880-748-327	Sequence 327, App
2	583	100.0	249	11	US-09-880-748-434	Sequence 434, App
3	583	100.0	249	11	US-09-880-748-506	Sequence 506, App
4	583	100.0	249	11	US-09-880-748-782	Sequence 782, App
5	580	99.5	248	11	US-09-880-748-339	Sequence 339, App
6	580	99.5	248	11	US-09-880-748-347	Sequence 347, App
7	580	99.5	248	11	US-09-880-748-354	Sequence 354, App
8	580	99.5	248	11	US-09-880-748-597	Sequence 597, App
9	580	99.5	248	11	US-09-880-748-623	Sequence 623, App
10	580	99.5	249	11	US-09-880-748-2	Sequence 2, Appli
11	580	99.5	249	11	US-09-880-748-323	Sequence 323, App
12	580	99.5	249	11	US-09-880-748-324	Sequence 324, App
13	580	99.5	249	11	US-09-880-748-326	Sequence 326, App
14	580	99.5	249	11	US-09-880-748-332	Sequence 332, App
15	580	99.5	249	11	US-09-880-748-333	Sequence 333, App
16	580	99.5	249	11	US-09-880-748-334	Sequence 334, App
17	580	99.5	249	11	US-09-880-748-335	Sequence 335, App
18	580	99.5	249	11	US-09-880-748-336	Sequence 336, App
19	580	99.5	249	11	US-09-880-748-338	Sequence 338, App
20	580	99.5	249	11	US-09-880-748-342	Sequence 342, App
21	580	99.5	249	11	US-09-880-748-343	Sequence 343, App
22	580	99.5	249	11	US-09-880-748-344	Sequence 344, App
23	580	99.5	249	11	US-09-880-748-345	Sequence 345, App
24	580	99.5	249	11	US-09-880-748-348	Sequence 348, App
25	580	99.5	249	11	US-09-880-748-349	Sequence 349, App
26	580	99.5	249	11	US-09-880-748-350	Sequence 350, App
27	580	99.5	249	11	US-09-880-748-352	Sequence 352, App
28	580	99.5	249	11	US-09-880-748-355	Sequence 355, App
29	580	99.5	249	11	US-09-880-748-356	Sequence 356, App
30	580	99.5	249	11	US-09-880-748-357	Sequence 357, App
31	580	99.5	249	11	US-09-880-748-358	Sequence 358, App
32	580	99.5	249	11	US-09-880-748-359	Sequence 359, App
33	580	99.5	249	11	US-09-880-748-360	Sequence 360, App
34	580	99.5	249	11	US-09-880-748-361	Sequence 361, App
35	580	99.5	249	11	US-09-880-748-363	Sequence 363, App
36	580	99.5	249	11	US-09-880-748-364	Sequence 364, App
37	580	99.5	249	11	US-09-880-748-365	Sequence 365, App
38	580	99.5	249	11	US-09-880-748-367	Sequence 367, App
39	580	99.5	249	11	US-09-880-748-368	Sequence 368, App
40	580	99.5	249	11	US-09-880-748-369	Sequence 369, App
41	580	99.5	249	11	US-09-880-748-370	Sequence 370, App
42	580	99.5	249	11	US-09-880-748-371	Sequence 371, App
43	580	99.5	249	11	US-09-880-748-372	Sequence 372, App
44	580	99.5	249	11	US-09-880-748-373	Sequence 373, App
45	580	99.5	249	11	US-09-880-748-375	Sequence 375, App

ALIGNMENTS

RESULT 1
US-09-880-748-327
; Sequence 327, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 327
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-327

Query Match 100.0%; Score 583; DB 11; Length 249;
Best Local Similarity 100.0%; Pred. No. 4.1e-47;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249


RESULT 2
US-09-880-748-434
; Sequence 434, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 434
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-434

  Query Match           100.0%;  Score 583;  DB 11;  Length 249;
  Best Local Similarity  100.0%;  Pred. No. 4.1e-47;
  Matches  111;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249


RESULT 3
US-09-880-748-506
; Sequence 506, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 506
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-506

  Query Match           100.0%;  Score 583;  DB 11;  Length 249;
  Best Local Similarity  100.0%;  Pred. No. 4.1e-47;
  Matches  111;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249


RESULT 4
US-09-880-748-782
; Sequence 782, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16,
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 782
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-782

  Query Match           100.0%;  Score 583;  DB 11;  Length 249;
  Best Local Similarity  100.0%;  Pred. No. 4.1e-47;
  Matches  111;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249


RESULT 5
US-09-880-748-339
; Sequence 339, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
```

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;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 339
;   LENGTH: 248
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-339

  Query Match             99.5%;  Score 580;  DB 11;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 6
US-09-880-748-347
; Sequence 347, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 347
;   LENGTH: 248
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-347

  Query Match             99.5%;  Score 580;  DB 11;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 7
US-09-880-748-354
; Sequence 354, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 354
;   LENGTH: 248
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-354

  Query Match             99.5%;  Score 580;  DB 11;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 8
US-09-880-748-597
; Sequence 597, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 597
;   LENGTH: 248
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-597

  Query Match             99.5%;  Score 580;  DB 11;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 9
US-09-880-748-623
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; Sequence 623, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 623
;   LENGTH: 248
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-623

  Query Match             99.5%;  Score 580;  DB 11;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 10
US-09-880-748-2
; Sequence 2, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-2

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 11
US-09-880-748-323
; Sequence 323, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 323
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-323

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 12
US-09-880-748-324
; Sequence 324, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 324
;   LENGTH: 249
;   TYPE: PRT
```

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;   ORGANISM: Homo sapiens
US-09-880-748-324

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 13
US-09-880-748-326
; Sequence 326, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 326
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-326

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 14
US-09-880-748-332
; Sequence 332, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 332
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-332

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 15
US-09-880-748-333
; Sequence 333, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 333
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-333

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 16
US-09-880-748-334
; Sequence 334, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
```

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;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 334
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-334

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 17
US-09-880-748-335
; Sequence 335, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 335
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-335

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 18
US-09-880-748-336
; Sequence 336, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 336
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-336

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 19
US-09-880-748-338
; Sequence 338, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 338
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-338

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
```

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  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 20
US-09-880-748-342
; Sequence 342, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 342
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-342

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 21
US-09-880-748-343
; Sequence 343, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 343
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-343

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 22
US-09-880-748-344
; Sequence 344, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 344
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-344

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 23
US-09-880-748-345
; Sequence 345, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
```

```
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 345
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-345

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 24
US-09-880-748-348
; Sequence 348, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 348
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-348

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 25
US-09-880-748-349
; Sequence 349, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 349
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-349

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 26
US-09-880-748-350
; Sequence 350, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 350
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-350

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198
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```
Qy          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db         199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 27
US-09-880-748-352
; Sequence 352, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 352
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-352

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy           1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db         199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 28
US-09-880-748-355
; Sequence 355, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 355
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-355

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local.Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy           1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db         199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 29
US-09-880-748-356
; Sequence 356, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 356
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-356

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy           1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy          61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db         199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 30
US-09-880-748-357
; Sequence 357, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
```

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;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 357
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-357

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 31
US-09-880-748-358
; Sequence 358, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 358
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-358

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 32
US-09-880-748-359
; Sequence 359, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 359
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-359

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 33
US-09-880-748-360
; Sequence 360, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 360
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-360

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
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RESULT 34
US-09-880-748-361
; Sequence 361, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 361
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-361

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 35
US-09-880-748-363
; Sequence 363, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 363
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-363

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 36
US-09-880-748-364
; Sequence 364, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 364
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-364

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 37
US-09-880-748-365
; Sequence 365, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
```

; SEQ ID NO 365
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-365

Query Match 99.5%; Score 580; DB 11; Length 249;
Best Local Similarity 99.1%; Pred. No. 7.8e-47;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 38
US-09-880-748-367
; Sequence 367, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 367
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-367

Query Match 99.5%; Score 580; DB 11; Length 249;
Best Local Similarity 99.1%; Pred. No. 7.8e-47;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 39
US-09-880-748-368
; Sequence 368, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 368
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-368

Query Match 99.5%; Score 580; DB 11; Length 249;
Best Local Similarity 99.1%; Pred. No. 7.8e-47;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 40
US-09-880-748-369
; Sequence 369, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 369
; LENGTH: 249
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-880-748-369

Query Match 99.5%; Score 580; DB 11; Length 249;
Best Local Similarity 99.1%; Pred. No. 7.8e-47;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 41
US-09-880-748-370
; Sequence 370, Application US/09880748
; Publication No. US20030059937A1

```
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 370
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-370

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 42
US-09-880-748-371
; Sequence 371, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 371
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-371

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 43
US-09-880-748-372
; Sequence 372, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 372
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-372

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 44
US-09-880-748-373
; Sequence 373, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 373
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-373
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  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 45
US-09-880-748-375
; Sequence 375, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 375
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-375

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 46
US-09-880-748-376
; Sequence 376, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 376
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-376

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 47
US-09-880-748-377
; Sequence 377, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 377
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-377

  Query Match             99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 48
US-09-880-748-379
; Sequence 379, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
```

```
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 379
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-379

  Query Match           99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity  99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 49
US-09-880-748-381
; Sequence 381, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 381
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-381

  Query Match           99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity  99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 50
US-09-880-748-382
; Sequence 382, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
;  APPLICANT: Ruben et al.
;  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
;  FILE REFERENCE: PF523
;  CURRENT APPLICATION NUMBER: US/09/880,748
;  CURRENT FILING DATE:  2001-06-15
;  PRIOR APPLICATION NUMBER: 60/212,210
;  PRIOR FILING DATE: 2000-06-15
;  PRIOR APPLICATION NUMBER: 60/240,816
;  PRIOR FILING DATE: 2000-10-17
;  PRIOR APPLICATION NUMBER: 60/276,248
;  PRIOR FILING DATE: 2001-03-16
;  PRIOR APPLICATION NUMBER: 60/277,379
;  PRIOR FILING DATE: 2001-03-21
;  PRIOR APPLICATION NUMBER: 60/293,499
;  PRIOR FILING DATE: 2001-05-25
;  NUMBER OF SEQ ID NOS: 3239
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 382
;   LENGTH: 249
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-880-748-382

  Query Match           99.5%;  Score 580;  DB 11;  Length 249;
  Best Local Similarity  99.1%;  Pred. No. 7.8e-47;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
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Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


Search completed: November 26, 2003, 13:49:52
Job time : 24.7179 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: November 26, 2003, 13:29:34 ; Search time 35.5769 Seconds
(without alignments)
495.227 Million cell updates/sec

Title: US-09-880-748-327_COPY_139_249
Perfect score: 583
Sequence: 1 AFSSELTQDPAVSVALGQTV.....RDSSGNHWVFGGGTELTVLG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	583	100.0	249	23	ABP44316	Human BLyS binding
2	583	100.0	249	23	ABP44423	Human BLyS binding
3	583	100.0	249	23	ABP44495	Human BLyS binding
4	583	100.0	249	23	ABP44771	Human BLyS binding
5	580	99.5	248	23	ABP44328	Human BLyS binding
6	580	99.5	248	23	ABP44336	Human BLyS binding
7	580	99.5	248	23	ABP44343	Human BLyS binding
8	580	99.5	248	23	ABP44586	Human BLyS binding
9	580	99.5	248	23	ABP44612	Human BLyS binding
10	580	99.5	249	23	ABP43991	Human BLyS binding
11	580	99.5	249	23	ABP44312	Human BLyS binding
12	580	99.5	249	23	ABP44313	Human BLyS binding
13	580	99.5	249	23	ABP44315	Human BLyS binding
14	580	99.5	249	23	ABP44321	Human BLyS binding
15	580	99.5	249	23	ABP44322	Human BLyS binding
16	580	99.5	249	23	ABP44323	Human BLyS binding
17	580	99.5	249	23	ABP44324	Human BLyS binding
18	580	99.5	249	23	ABP44325	Human BLyS binding
19	580	99.5	249	23	ABP44327	Human BLyS binding
20	580	99.5	249	23	ABP44331	Human BLyS binding
21	580	99.5	249	23	ABP44332	Human BLyS binding
22	580	99.5	249	23	ABP44333	Human BLyS binding
23	580	99.5	249	23	ABP44334	Human BLyS binding
24	580	99.5	249	23	ABP44337	Human BLyS binding
25	580	99.5	249	23	ABP44338	Human BLyS binding
26	580	99.5	249	23	ABP44339	Human BLyS binding
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28	580	99.5	249	23	ABP44344	Human BLyS binding
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34	580	99.5	249	23	ABP44350	Human BLyS binding
35	580	99.5	249	23	ABP44352	Human BLyS binding
36	580	99.5	249	23	ABP44353	Human BLyS binding
37	580	99.5	249	23	ABP44354	Human BLyS binding
38	580	99.5	249	23	ABP44356	Human BLyS binding
39	580	99.5	249	23	ABP44357	Human BLyS binding
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41	580	99.5	249	23	ABP44359	Human BLyS binding
42	580	99.5	249	23	ABP44360	Human BLyS binding
43	580	99.5	249	23	ABP44361	Human BLyS binding
44	580	99.5	249	23	ABP44362	Human BLyS binding
45	580	99.5	249	23	ABP44364	Human BLyS binding

ALIGNMENTS

RESULT 1
ABP44316
ID ABP44316 standard; Protein; 249 AA.
XX
AC ABP44316;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 327.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.

PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 794-795; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 100.0%; Score 583; DB 23; Length 249;
Best Local Similarity 100.0%; Pred. No. 9.2e-37;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249

RESULT 2
ABP44423
ID ABP44423 standard; Protein; 249 AA.
XX
AC ABP44423;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 434.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 921-922; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 100.0%; Score 583; DB 23; Length 249;
Best Local Similarity 100.0%; Pred. No. 9.2e-37;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249

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ID ABP44495 standard; Protein; 249 AA.
XX
AC ABP44495;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 506.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.

PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1006-1007; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

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  Query Match             100.0%;  Score 583;  DB 23;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-37;
  Matches  111;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 249
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AC ABP44771;
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DT 19-AUG-2002 (first entry)
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KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1334-1335; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

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  Query Match             100.0%;  Score 583;  DB 23;  Length 249;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-37;
  Matches  111;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
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RESULT 5
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ID ABP44328 standard; Protein; 248 AA.
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AC ABP44328;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 339.
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KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.

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XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 808-809; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   248 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 1.5e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
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Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 6
ABP44336
ID   ABP44336 standard; Protein; 248 AA.
XX
AC   ABP44336;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 347.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
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XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 818-819; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   248 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 248;
  Best Local Similarity   99.1%;  Pred. No. 1.5e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||:||||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248


RESULT 7
ABP44343
ID   ABP44343 standard; Protein; 248 AA.
XX
AC   ABP44343;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 354.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
```

KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 826-827; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 248 AA;

Query Match 99.5%; Score 580; DB 23; Length 248;
Best Local Similarity 99.1%; Pred. No. 1.5e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||:|||||||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248
```

RESULT 8
ABP44586
ID ABP44586 standard; Protein; 248 AA.
XX
AC ABP44586;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 597.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1114-1115; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 248 AA;

Query Match 99.5%; Score 580; DB 23; Length 248;
Best Local Similarity 99.1%; Pred. No. 1.5e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||:|||||||||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248
```

RESULT 9
ABP44612
ID ABP44612 standard; Protein; 248 AA.
XX
AC ABP44612;
XX
DT 19-AUG-2002 (first entry)
XX

DE Human BLyS binding scFv SEQ ID 623.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 1145-1146; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 248 AA;

Query Match 99.5%; Score 580; DB 23; Length 248;
Best Local Similarity 99.1%; Pred. No. 1.5e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        138 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 197

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        198 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 248
```

RESULT 10
ABP43991
ID ABP43991 standard; Protein; 249 AA.
XX
AC ABP43991;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 2.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 408-409; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

RESULT 11
ABP44312

```
ID   ABP44312 standard; Protein; 249 AA.
XX
AC   ABP44312;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 323.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 789-790; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||:|||||||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

```
RESULT 12
ABP44313
ID   ABP44313 standard; Protein; 249 AA.
XX
AC   ABP44313;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 324.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 790-791; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
```

```
                    ||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 13
ABP44315
ID   ABP44315 standard; Protein; 249 AA.
XX
AC   ABP44315;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 326.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 793-794; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 14
ABP44321
ID   ABP44321 standard; Protein; 249 AA.
XX
AC   ABP44321;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 332.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 800-801; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 15
ABP44322
ID   ABP44322 standard; Protein; 249 AA.
XX
AC   ABP44322;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 333.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 801-802; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match            99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity  99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 16
ABP44323
ID   ABP44323 standard; Protein; 249 AA.
XX
AC   ABP44323;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 334.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 802-803; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
```

```
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 17
ABP44324
ID   ABP44324 standard; Protein; 249 AA.
XX
AC   ABP44324;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 335.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 804-805; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 18
ABP44325
ID   ABP44325 standard; Protein; 249 AA.
XX
AC   ABP44325;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 336.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 805-806; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
```

CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 19
ABP44327
ID ABP44327 standard; Protein; 249 AA.
XX
AC ABP44327;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 338.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 807-808; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 20
ABP44331
ID ABP44331 standard; Protein; 249 AA.
XX
AC ABP44331;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 342.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 812-813; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,

```
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 21
ABP44332
ID   ABP44332 standard; Protein; 249 AA.
XX
AC   ABP44332;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 343.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 813-814; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 22
ABP44333
ID   ABP44333 standard; Protein; 249 AA.
XX
AC   ABP44333;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 344.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 814-815; 3148pp; English.
```

XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 23
ABP44334
ID ABP44334 standard; Protein; 249 AA.
XX
AC ABP44334;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 345.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 815-816; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 24
ABP44337
ID ABP44337 standard; Protein; 249 AA.
XX
AC ABP44337;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 348.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX

DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 819-820; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||:||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 25
ABP44338
ID ABP44338 standard; Protein; 249 AA.
XX
AC ABP44338;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 349.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 820-821; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||:||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 26
ABP44339
ID ABP44339 standard; Protein; 249 AA.
XX
AC ABP44339;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 350.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.

XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 821-822; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 27
ABP44341
ID ABP44341 standard; Protein; 249 AA.
XX
AC ABP44341;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 352.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 824-825; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 28
ABP44344
ID ABP44344 standard; Protein; 249 AA.
XX
AC ABP44344;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 355.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.

```
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 827-828; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 29
ABP44345
ID   ABP44345 standard; Protein; 249 AA.
XX
AC   ABP44345;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 356.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 828-829; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 30
ABP44346
ID   ABP44346 standard; Protein; 249 AA.
XX
AC   ABP44346;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 357.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
```

XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 830-831; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 31
ABP44347
ID ABP44347 standard; Protein; 249 AA.
XX
AC ABP44347;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 358.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 831-832; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 32
ABP44348
ID ABP44348 standard; Protein; 249 AA.
XX
AC ABP44348;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 359.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;

KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 832-833; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 33
ABP44349
ID ABP44349 standard; Protein; 249 AA.
XX
AC ABP44349;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 360.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 833-834; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
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CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
|||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 34
ABP44350
ID ABP44350 standard; Protein; 249 AA.
XX
AC ABP44350;
XX

DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 361.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
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PS Claim 1; Page 834-835; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 35
ABP44352
ID ABP44352 standard; Protein; 249 AA.
XX
AC ABP44352;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 363.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
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PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
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PS Claim 1; Page 837-838; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
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CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
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CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
||||||||||||||||||||||||||||:||||||||||||||||||||||
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

```
RESULT 36
ABP44353
ID   ABP44353 standard; Protein; 249 AA.
XX
AC   ABP44353;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 364.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 838-839; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
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CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 37
ABP44354
ID   ABP44354 standard; Protein; 249 AA.
XX
AC   ABP44354;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 365.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 839-840; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198
```

```
Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

RESULT 38
ABP44356
ID ABP44356 standard; Protein; 249 AA.
XX
AC ABP44356;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 367.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 841-842; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

RESULT 39
ABP44357
ID ABP44357 standard; Protein; 249 AA.
XX
AC ABP44357;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 368.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 843-844; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;

```
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 40
ABP44358
ID   ABP44358 standard; Protein; 249 AA.
XX
AC   ABP44358;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 369.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 844-845; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 41
ABP44359
ID   ABP44359 standard; Protein; 249 AA.
XX
AC   ABP44359;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 370.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 845-846; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
```

CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 42
[redacted]4360
[redacted] ABP44360 standard; Protein; 249 AA.
XX
AC ABP44360;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 371.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 846-847; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 43
ABP44361
ID ABP44361 standard; Protein; 249 AA.
XX
AC ABP44361;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 372.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 847-848; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease

CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 44
ABP44362
ID ABP44362 standard; Protein; 249 AA.
XX
AC ABP44362;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 373.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 849-850; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
Db 139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy 61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
Db 199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249

RESULT 45
ABP44364
ID ABP44364 standard; Protein; 249 AA.
XX
AC ABP44364;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 375.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 851-852; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell

```
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 46
ABP44365
ID   ABP44365 standard; Protein; 249 AA.
XX
AC   ABP44365;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 376.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
XX
PS   Claim 1; Page 852-853; 3148pp; English.
XX
CC   This invention describes novel antibodies that immunospecifically bind to
CC   B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC   tumour necrosis factor (TNF) super family and induces B cell
CC   proliferation and differentiation. The antibodies of the invention have
CC   cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC   antirheumatic and antiAIDS activity and can be used in vaccines to
CC   inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC   and so may be used to detect and quantitate the presence of BLyS in
CC   biological samples and may be used in this way to diagnose disease
CC   associated with aberrant expression of BLyS. They may also be
CC   administered to treat diseases associated with aberrant BLyS expression
CC   and activity such as cancer, immune, and autoimmune disorders and
CC   diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC   immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC   acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC   the antibodies and fragments of the antibodies described in the method
CC   of the invention.
XX
SQ   Sequence   249 AA;

  Query Match             99.5%;  Score 580;  DB 23;  Length 249;
  Best Local Similarity   99.1%;  Pred. No. 1.6e-36;
  Matches  110;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249


RESULT 47
ABP44366
ID   ABP44366 standard; Protein; 249 AA.
XX
AC   ABP44366;
XX
DT   19-AUG-2002  (first entry)
XX
DE   Human BLyS binding scFv SEQ ID 377.
XX
KW   BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW   tumour necrosis factor; B cell proliferation; B cell differentiation;
KW   immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW   antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW   systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW   common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS   Homo sapiens.
XX
PN   WO200202641-A1.
XX
PD   10-JAN-2002.
XX
PF   15-JUN-2001; 2001WO-US19110.
XX
PR   16-JUN-2000; 2000US-212210P.
PR   17-OCT-2000; 2000US-240816P.
PR   16-MAR-2001; 2001US-276248P.
PR   21-MAR-2001; 2001US-277379P.
PR   25-MAY-2001; 2001US-293499P.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
PA   (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI   Ruben SM,  Barash SC,  Choi GH,  Vaughan T,  Hilbert D;
XX
DR   WPI; 2002-114799/15.
XX
PT   Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT   the diagnosis and treatment of cancers and immune disorders -
```

XX
PS Claim 1; Page 853-854; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
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RESULT 48
ABP44368
ID ABP44368 standard; Protein; 249 AA.
XX
AC ABP44368;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 379.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 856-857; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              |||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

RESULT 49
ABP44370
ID ABP44370 standard; Protein; 249 AA.
XX
AC ABP44370;
XX
DT 19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 381.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX

PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 858-859; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

RESULT 50
ABP44371
ID ABP44371 standard; Protein; 249 AA.
XX
AC ABP44371;
XX
[redacted]19-AUG-2002 (first entry)
XX
DE Human BLyS binding scFv SEQ ID 382.
XX
KW BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW tumour necrosis factor; B cell proliferation; B cell differentiation;
KW immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS Homo sapiens.
XX
PN WO200202641-A1.
XX
PD 10-JAN-2002.
XX
PF 15-JUN-2001; 2001WO-US19110.
XX
PR 16-JUN-2000; 2000US-212210P.
PR 17-OCT-2000; 2000US-240816P.
PR 16-MAR-2001; 2001US-276248P.
PR 21-MAR-2001; 2001US-277379P.
PR 25-MAY-2001; 2001US-293499P.
XX

PA (HUMA-) HUMAN GENOME SCI INC.
PA (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PI Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR WPI; 2002-114799/15.
XX
PT Antibodies against B Lymphocyte Stimulating polypeptides, useful for
PT the diagnosis and treatment of cancers and immune disorders -
XX
PS Claim 1; Page 859-860; 3148pp; English.
XX
CC This invention describes novel antibodies that immunospecifically bind to
CC B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC tumour necrosis factor (TNF) super family and induces B cell
CC proliferation and differentiation. The antibodies of the invention have
CC cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC antirheumatic and antiAIDS activity and can be used in vaccines to
CC inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC and so may be used to detect and quantitate the presence of BLyS in
CC biological samples and may be used in this way to diagnose disease
CC associated with aberrant expression of BLyS. They may also be
CC administered to treat diseases associated with aberrant BLyS expression
CC and activity such as cancer, immune, and autoimmune disorders and
CC diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC the antibodies and fragments of the antibodies described in the method
CC of the invention.
XX
SQ Sequence 249 AA;

Query Match 99.5%; Score 580; DB 23; Length 249;
Best Local Similarity 99.1%; Pred. No. 1.6e-36;
Matches 110; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        139 AFSSELTQDPAVSVALGQTVRVTCQGDSLRSYYASWYQQKPGQAPVLVIYGKNNRPSGIP 198

Qy         61 DRFSGSSSGNTASLTITGAQAEDEADYYCSSRDSSGNHWVFGGGTELTVLG 111
              ||||||||||||||||||||||||||||||:||||||||||||||||||||
Db        199 DRFSGSSSGNTASLTITGAQAEDEADYYCNSRDSSGNHWVFGGGTELTVLG 249
```

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Job time : 36.5769 secs